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TELEGRAPHIC ADDRESS—LANCET, LONDON [ONE HUNDRED AND SIXTY PAGES.] TELEPHONE NUMBER—5356 GERRARD

No. XIII. OF VOL. I., 1907. No. 4361. Vol. CLXXII. LONDON, SATURDAY, MARCH 30, 1907. PRICE 7d.; POST FREE, 7½d. [Pp. 120+40.

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LECTURE I.

Delivered on March 14th.

MR. PRESIDENT, FELLOWS, AND GENTLEMEN,—I have little doubt that each of my predecessors has in turn experienced a certain apprehension before he has delivered, with due imperturbability, the Lumleian lectures. In my own case the feeling of pride at the honour bestowed on me by the selection of our President was immediately succeeded by some uncertainty as to the precise subject which I should select, and the apprehension still persists lest I should in any way fail in my duty or fall short of my responsibility to you. Wishing to do my best I have naturally selected the subject which my special experience of 40 years should enable me to treat with some authority. But as I have not thought it desirable on this occasion to hazard any new theory or treat any special point with all the detail of thought and illustration which it would undoubtedly require, I trust that the apparently somewhat discursive nature of my remarks upon the wider issues may be attributed to a desire to lay before you facts which are of general rather than highly particularised significance. At the present time the subject of the increase of insanity is being very carefully considered, not only in England but in all civilised countries, and I feel that the very fact that it is being so considered has increased my difficulty. In all directions, both in the medical and lay press, articles have appeared on the subject, so that I have little doubt that the opinions which are the result of my own experience will frequently be found to coincide with the opinions already expressed by other observers. At the outset I must acknowledge my own definite conviction that there *is* a steady increase in the numbers of the insane, and that this increase shows a definite relationship to the progress of civilisation. I do not myself think that this estimation necessarily implies the hopeless degeneration of the race, nor do I think that it furnishes an authentic basis for dread as to the future of the minds and bodies of our successors. With the multiplication of rules and regulations it becomes more and more difficult to characterise individual groups, but my own particular experience seems to indicate that many cases are attributable rather to social misfits than to material brain disease. In describing these and similar cases I may say that I rely upon my own observation supported by such statistics drawn from official sources as I may find it necessary to employ in connexion with the more recognised groups.

Let me, however, indicate the lines on which I propose to move. First of all, before studying the question of the increase of insanity it is essential that we should recognise what we mean by insanity. Of course, I take primarily the medical standpoint, but I have my doubts as to whether the social one is not, after all, the more practically important of the two. We find ample evidence that with no merely medical opinion on unsoundness of mind is the public easily satisfied; no doubt it would often be much better if it were. Next I will examine briefly into the more generally accepted causes and endeavour to show if it is possible to find amongst them any indication of the actual lines of increase. So that in a word the question will be, What are the special forms of insanity which are increasing? What are the causes which are more in evidence than they formerly were? And what hitherto unrecognised moral or physical causes are tending to produce, or to reproduce, mental unsoundness? And the evidence which I can offer in reply to these questions will, I hope, enable you to form conclusions as to the validity of the reasons given for the increase of the certified or uncertified insane.

To begin with, in judging the conduct of any person supposed to be of unsound mind it must be recognised that similar conduct may arise from totally different disorders or circumstances and also that the mind is a very complex thing which has many ways of expressing the same feeling. Take, for example, the exaltation of ideas in a patient believing himself to be a king or a person of distinction. Such an idea may correspond with a temporary increase of pulse rate and I have seen it prominent or suppressed as the pulse varied. It may succeed to the loss of judgment as a feeling of buoyancy in general paralysis of the insane; it may be associated with the temporary disorder produced by brain-poisoning—say by lead or alcohol; or it may be a slow growth in some "mute inglorious Milton" or lonely idealist, who, possibly building on the "might have been," finally recognises in himself or herself a scion of royalty or an inspired poet. Or again, perhaps in a more advanced stage of degeneration of tissue the patient may have begun by feeling that he was watched or spied upon, until at length he discovered that all this was merely the protection essential to the movements of a royal personage—himself. In each case the conduct of the patient is similar, though the underlying ideas are so different. Similarly, I have often had to point out that what might be a reasonable act in one person would be insane extravagance in another. I mention these facts here because in determining what is meant by insanity or what is to be done for it the circumstances and environment have always to be considered. And notwithstanding their mutual points of resemblance, no one pathology or treatment is applicable to all such cases.

A question which I am often asked is whether I believe that certain persons only can be driven insane, whether the rest can never be driven mad—whether in regard to these latter anything whatever in the shape of exciting cause will produce definite symptoms without the insane proclivity. My reply is that almost anyone may have delirium, which is temporary insanity; that almost anyone given certain physical causes may have general paralysis. Also, as is sufficiently evident, that with advancing years the powers of the mind, both on the motor and sensory sides, may be impaired or disabled before the other functions of the body. Yet this notwithstanding I still believe there are some persons who can hardly be driven mad by any outside stress or emotional cause. And surely it is worthy of consideration that so many very aged persons retain their senses and reasoning power almost unimpaired until the very last. On the other hand, that there is a class of persons accurately described as "neurotic" is very evident; and it is equally certain that it is this class which provides the largest number of sufferers from insanity and allied disorders. It is in regard to these that I have stated my belief that there is no ground for supposing the increase to be of an alarming extent.

But it may be well here to consider what I mean by "neurotic," for I find it regarded as such a convenient term that it has frequently been made to include almost any nervous or mental disorder not showing very marked symptoms. To be civilised, as a sane person, implies the capability of reacting normally to the changing conditions of one's surroundings, so as to interfere as little as possible with the interests, safety, and welfare of other persons living under similar conditions. With increasing complexity there must be an increasing power of adaptation, and, as might be expected, this will often be found associated with a deficient or an undue mobility. It is in this abnormality of reaction to surroundings that we find the true empirical basis of neurosis. Now this may arise from many diverse conditions. It may be a result of weak, degenerating, or insane parentage, or it may arise from causes which materially interfere with the nutrition of the higher nervous organs, from toxic influences, for example, or from generally debilitating causes, such as excesses of any kind. The point to consider is whether any of these influences have been acting so forcibly as to render the civilised races at the present time more likely to break down along nervous lines. In regard to this tendency the reports of the Commissioners in Lunacy for England, Scotland, and Ireland will be found most instructive. We are fortunate in this respect that the Irish Commissioners last year, taking it for granted that there was an increase in the numbers of the insane, addressed special inquiries to the various medical officers of the asylums on this point and elicited their individual opinions in regard to it. Special stress, I may remark incidentally, was laid upon the danger of hereditary predisposition and excessive indulgence in alcohol. I think, therefore, that conclusions based on these reports, in so far as they agree, may be taken

as the composite opinion of asylum physicians as to the causes of any such increase.

And now to speak a little more definitely on my first point. I still believe that what Hughlings Jackson said many years ago is true—viz., that we physicians connected with insanity resemble gardeners rather than botanists, that the fact must be recognised that we classify for convenience rather than upon a scientific basis, because in point of fact no such basis, or finality of mode, has as yet been discovered. And perhaps little wonder, since many have to be treated as lunatics in whose brains and nervous systems we have found no change whatever. Unfortunately, this necessity of definition and classification to which I have referred may sometimes lend itself to misinterpretation, as in the pseudo-legal idea—which I regard as neither reasonable nor convenient—that every person of unsound mind is a lunatic. Obviously there are many persons of unsound mind who are neither dangerous to themselves nor to others—why, therefore, regard them as aliens? The true difficulty is that the disease insanity, as a definite entity, does not exist. Yet one might almost conclude from the elaborate articles which have appeared in our leading daily journal that it does, and that it is as definite in its symptoms and its origin as cancer or pulmonary tuberculosis. It is impossible for the physician to view abnormalities of mind, whether congenital or acquired, as having a common origin and requiring a similar treatment. There is no such thing as a bacillus of insanity. I have dwelt upon this point because one of the many difficulties which the study of the insane involves is the necessity of regarding them from so many different standpoints. The medical man concerns himself chiefly with the evidences of bodily disease to be discovered in the brain or one of its servants; the lawyer looks not so much to symptoms as to the questions of reason and responsibility, whether, in fact, the individual can recognise what he is doing and the consequences of it. The public at large considers chiefly questions of conduct, asking whether a person is dangerous to himself or to others. *Apropos* of the latter, we constantly meet with statements that many people are placed in asylums because they are troublesome rather than because they are dangerous; and it is also worthy of remark that there are many who desire that the feeble-minded and eccentric should have greater or even perfect liberty, so long as they are not a social danger. This point is, I think, rather well illustrated in the peculiar distinctions recognised on the popular side—thus, persons are spoken of as being "beside themselves," or "out of their senses," or "out of their minds." To these you will note that I have already added my own conviction that many are really "out of their surroundings" and thus are aliens.

The conclusion then follows that, there being no definite entity of insanity, there can be no one comprehensive definition of it. And that the person is sane or insane in relation to his own standard and not to any existent arbitrary one, except the conventional arbitrament of civilisation. And as this varies the truth of my former remark becomes evident, that what is reasonable conduct in one man under certain conditions may be plain madness in another differently situated. I often think of a splendid young animal whom I saw—the son of a distinguished father who rightly judged his son to be an anachronism—out of place in fact; and considered that he would have made a fine knight in the Middle Ages, and perhaps even now might make a good cowboy in America. It becomes evident from such a case that there may be some who have a reason for attributing the causes of their insane position to their wrong surroundings. And here I would point out, as I have already hinted, that there is a sense in which insanity is merely a question of degree. For example, a small amount of miserliness may be all right; but, when you find it developed into the habits of the recluse, who starves himself though he has plenty of money, avoids all society, and neglects cleanliness and all the simpler conventions of life, he is treated as insane. Again, I knew a recluse, with plenty of money, who lived a hermit's life for 30 years or more, prowling about the streets at night, and lying in bed during the day; yet no steps were taken, as he did not interfere with society. But when called to see a similar case not so well off I found that the authorities had already been called in. His small house being neglected was regarded as insanitary and he was removed to an asylum. Thus we see that similar conduct is, or is not, practically regarded as insanity according to the conditions. And if there should be some who regard this view as of little importance from the practical or statistical standpoint—as referring, in fact, to a very small area in the wide field to be covered by the specialist—as not affecting in a vital degree the estimated sum-total of the insane, I am not in agreement. I still maintain that very many of the chronic insane owe their position largely to their surroundings, and the part which their surroundings and circumstances have played as a factor in the determination of that position is precisely what it is often important to consider before any reliable statistics can be built up in regard to the mental evolution or degeneration of the race.

With regard to a certain degree of a particular habit or feeling being considered normal, but its excess insanity, I may give the example of a very devoted husband who with advancing years dreaded the absence, even for a very short time, of his wife. Later he began to suspect that she was more absent than was necessary. Finally, though there was not the slightest ground for suspicion, he demanded from her a confession of her misconduct, calmly observing that he would forget and forgive. Thus, the overgrowth of natural affection and the suspicion of an imaginary sin have led, I fear, to a permanent delusion wrecking two lives. Where are we to look for the material basis of such a delusion? The conditions are still more complicated when the person proves to be a social misfit. There are some, like my cowboy youth, who are out of harmony with their surroundings from the first. There are others who as a result of education, disease, or other circumstances or causes, pass into a social grade different from their own. I have known public school and university men who have proved quite unfit for their natural home and yet they have done admirably as artisans. Are we to have a pathology for such conditions? Of course, a certain number of these social failures add to the numbers of the insane in our infirmaries and asylums. Undoubtedly, some may say there is some brain defect in these persons to account for their degradation; but how about the change of reformation, and in regard to those who have been converted, are we to have a pathology of conversion as well as of perversion? At any rate, the fact remains that not only from the social but from all other standpoints insanity is judged rather from conduct than from any known mental symptoms.

I will now in order proceed to consider the insanity of brain disease, the insanity of brain intoxication, the insanity of the truly neurotic type, the insanity of habit or association, and the insanity of function, simple disharmony, or want of accommodation. In considering these points I will give my experience as to the relative increase among them. First, then, there is a considerable amount of insanity depending upon natural decay of the nervous centres chiefly represented in the brain. The Commissioners give a table showing a considerable increase of longevity among the surviving senile insane. The chronic insane in asylums are like pensioners; they are removed from the stress and anxieties of life, they are carefully tended, and sometimes their very mental defect will lend itself to a calm which itself is favourable to a long life. Again, it is certain that, whereas in a former generation the old people were kept and guarded by their relatives, these latter are now more easily persuaded that they would, in their indifferent or mindless states, be happier in an asylum than elsewhere. And the infirmaries, on their part, are only too ready to transfer to asylums those who are not able to be of service in the wards and for whom they can get a bigger grant from public funds if they are sent to an asylum. Hence, the insanity of old age does certainly represent a considerable increase of the insane population. The forms of insanity associated with old age are not special in character, though many of them exhibit analogous features associated with loss of memory and loss of the senses of time, place, and relation. The insanity associated with premature decay, with toxic brain infection, is best represented by general paralysis of the insane. Here again, without doubt, there is considerable increase. In England, Scotland, and Ireland, all three, the Commissioners' reports prove this. Although we are at present unable to say that this disease proceeds from one definite source, there seems to be little doubt that syphilis added to alcoholic indulgence in city residents constitutes the chief cause. In England the progress is steady and it is interesting to note that this disease is now more prevalent among women than it used to be. This is markedly observable in Scotland. Women will have men's rights and with them they incur further risks. 40 years ago the

medical officers of asylums in Ireland used to come to Bethlem Hospital to see cases of general paralysis because they wished to assure themselves that they were not overlooking the disease. Personally I visited many Irish asylums in those days and I found very few cases of the disease, which now is common enough, particularly in the Irish asylums near cities. In America a similar experience has been recorded among the negroes, who before the Civil War rarely provided cases of general paralysis. Now they are common enough. In the last report general paralysis is stated to be increasing more rapidly in Edinburgh than in Glasgow. This seems hard to explain but I am inclined to think that more careful clinical examination in Edinburgh may account for the fact.

The next group to which I call attention is in many ways important and interesting, particularly at the present time, when toxins are the favourite explanation of most morbid states. I would, however, recall what Sutton said many years ago, that though there was doubtless much to be learnt from an observation of the relationship between micro-organisms and disease, yet, as effective causes, their importance might be over-estimated and their operation misunderstood, that just as we lived *on*, and aided *by*, them when healthy, so it was when we began to fail in any direction that the microbes were ready to prey on us. That mental disorder amounting to insanity may depend upon toxic influences is too well known to require much illustration on my part, yet it is perhaps worth while to note a few of the special forms of disorder which follow intoxications of one kind or another. First, then, there is generally a progressive affection beginning with the most highly specialised parts leading to defect in the last and most complex attainments, the continuance of such infection leads to further loss of power, and, as Hughlings Jackson has pointed out in his "Factors of Insanity," a letting loose of functions dependent on what he has called the lower or subordinate mental strata. It is thus that we get with loss of power, restlessness and deliria. A still further exposure to the influences leads to destruction of the parts and the annihilation of the functions. The result is a complete parallel to the decay met with in old age, which, I suppose, justifies Metchnikoff in his suggestion that senile changes depend on micro-organisms.

I have already spoken of neuroses and given some description, if not a precise definition, of them; and now, in natural order, I propose to consider the special forms of insanity which may be said to possess this common factor, that they are usually associated with insane or degenerating parentage. This class provides the largest number of long-lived residents in asylums, who used to be grouped together as dements. They generally come of insane stock and tend to transmit their neurosis, in one form or another, to their descendants. They are more liable than others to break down under slight stresses; *ceteris paribus*, their neuroses appear at the critical periods of life, such as adolescence, puberty, and, in the case of women, child-bearing and the menopause. These patients show a special liability to relapse after recovery, and, as a sequence, to establish a habit of recurring mental disorder—mania, melancholia, as the case may be. This morbid habit may become more and more organised and pass into regular circular insanity. The ease with which morbid mental processes are started in such cases is exemplified in the manner in which hallucinations of the various senses appear and develop; having appeared, they lead on in natural order to delusions of various kinds, to some extent coloured by the age, sex, education, and surroundings of the patient. But that persons even with fully-organised delusional insanity have any specially recognisable affection of their brains I deny. I daresay that in many there is some change of condition and in many also a defect of the highest powers; but as yet I am convinced we shall not learn much even from most careful histological observation. Without being a pessimist, I fear my experience is that such persons are slowly increasing in number and that no amount of drug treatment will have any effect upon them. If any good is to be done it seems to me that it is rather to be hoped for from the methodical and contemned treatment followed in asylums. What cannot be cured must be endured and I fear that persons suffering from fully organised delusions are as little likely to lose them in many cases as they are to change their features.

With the above we have to consider, as depending upon a neurotic heredity, those who furnish examples of certain, often recondite morbid modes of mental association—persons, in fact, suffering from so-called obsession. No reasoning seems to affect the beliefs or tendencies of these persons, yet in all other relationships their conduct may appear to be perfectly sane. Thus, a patient told me he knew it was a mistake, yet he dared not touch anything without gloves; another was afraid to sit in a chair without a preliminary dusting. He admitted that this was useless even if there were infection in the chair, all the same he must go through with it. Another patient, having been once bitten by a dog, was never free from the dread of hydrophobia, and though no signs existed of the dog ever having suffered from rabies, yet he could not go near the city where the accident happened. That with some of these morbid associations a physical basis bears a part I must admit, for this latter gentleman only comes to consult other physicians or myself when he is suffering from general symptoms of ill-health. On the whole I am not prepared to say whether there is any material increase among those suffering from obsessions.

To complete this part of the subject I must name the allied sufferers from the *folie de doute*. This may be taken to depend on different causes in different persons. The highly-trained legal mind may be so evenly poised that it cannot come to a conclusion; and the individual who suffers from this condition, or from its allied state of *Grübelsucht*, is suffering from a disorder which I cannot associate with brain disease. In regard to development the manner in which a simple natural idea may pass into a morbid one is shown in the following case. A well-educated man of good social position fell in love with a lady of good birth who in consequence of the ruin of her father found it necessary to give dancing lessons in order to earn money. The idea that she might expose her ankles to strangers so possessed him that he felt life intolerable, and no amount of argument that the lady was only teaching girls produced any effect. Again I have met with several doctors' wives who have developed an insane jealousy in consequence of their husbands attending midwifery cases. Thus, obsessions developed after the manner I have indicated have had serious practical effects, though in the cases to which I have referred the seclusion of the sufferers was not required.

Again, the perfectly natural way in which ordinary feelings may lead to insane developments is well illustrated in such cases as the following. A young man early in life becomes deaf; at first he feels the loss to be a very real and personal one, but he is content to do his best under the new limitations. Later he experiences several disappointments, probably in love; no doubt depending on his unfitness. Slowly he builds up a delusion that people shun him; gradually he becomes convinced that there is an organised system of annoyance. An insane or violent act may be the first indication of the progressive mental disorder. This is a case clearly associated with physical defect, but one constantly meets with patients endowed with a mere peculiarity which they think influences people against them. For example, a man with a scar on his nose believed that this was looked upon as the "mark of the Beast." Another, who had led a seafaring life, was certain that every one recognised in his scar evidence that he had had syphilis. Apart from personal defects or peculiarities one meets with many in whom a disharmony with the social environment has given rise to a morbid mental growth. A widow with small means has to reduce her expenditure. She believes her neighbours shun her; from this she develops a whole system of suggestion, innuendo, and annoyance, which may cause her to injure herself or her children, or perhaps to appeal to the police. Such cases are of everyday occurrence and I rather presume they tend to increase with the complexity of urban life.

Allied to such cases are those which I place under the heading "conscientious." Almost daily I see cases, generally young, of both sexes who, living their homelife and regarded as most quiet and well-behaved persons, have nevertheless slowly withdrawn from all intimate friendships, they have taken to self-improvement, they lead laborious days and often studious nights. They are said to be scrupulously conscientious. I often find them morbidly sensitive. Often they go on thus for years before it is discovered that brooding has led to the hatching of delusions of persecution. Here I suppose there is probably an unhealthy nervous system, but I do not think it is such a one as will in the material part of the brain be shown to be defective. This kind of case is frequently illustrated in the only sons of

widows who live their quiet life surrounded by female relations only. This class includes a large number of persons who drift into delusional insanity. I am fully aware of the fact that there are hundreds or thousands living similar lives who do *not* break down nervously, and that there are other elements in the situation. What I wish to enforce from the standpoint I have chosen is that such persons must be treated by change of condition and not merely by bedside study.

It will be seen that in all the cases to which I have been referring I deny the existence of any material pathology. I merely say that in those cases where the mutual reaction shows a distinct degrading influence in the surroundings of the individual it is more or less hopeless to look for any real uniform material cause in the person himself. Of course, I allow that variable bodily states may dispose a person to be more readily affected by his surroundings and therefore more unstable. But I shall have failed altogether if I have not shown that there are many nervous conditions in which the visible defect is one of arrangement and accommodation rather than destruction of any portion of the material basis of mind. I cannot therefore accept much that Hughlings Jackson has written in his "Factors of Insanity," because while he regards mental symptoms as the morbid product of the brain he does not sufficiently recognise them as a resultant of the forces of the environment. That every idea and every delusion have a representative in some material change in some part of the nervous system of course I do not deny: but that there are always definite changes which are the equivalent of insanity, I do deny. Before leaving this part of my subject I must refer to functional mental disorders. I cannot admit that all these have any material pathological basis. In fact, I still maintain that there are such things as functional mental and nervous disorders.

Let me quote what the late Dr. H. G. Sutton wrote on this matter: "Failure of function leads to organic destruction. It used to be taught that structure makes function, but it is the reverse, just as the blacksmith makes the horseshoe, fitting the iron for service. In nature it is evident that all function is making union—a living and a loving—while in disease there is disunion." Finally, unless we admit the supreme importance of surroundings both in giving rise to and in sustaining mental perversion, we cannot fully recognise the equally supreme necessity of judiciously modifying those surroundings and conditions in order to effect a salutary change.

To pass on, there was a girl admitted into Bethlem Hospital suffering from acute mania. After some weeks, quite suddenly, all the maniacal symptoms disappeared but she was paraplegic. The state of paralysis lasted for some weeks, to be again replaced by mania, which in its turn was again followed by paraplegia. Eventually the paraplegia slowly passed off, leaving the patient sane in body and mind. Certain other cases in which neuroses are interchanged are interesting: thus, sufferers from asthma or hay fever will lose these affections while suffering from another form of neurosis. I cannot find anything but a dynamic pathology for some of these cases of sudden cure. I have known patients apparently demented for years suddenly, without any bodily change, wake up perfectly sane and with no loss of mental power. A watch may lie inactive, for want of winding up, for years and yet not decay. The mind seems capable of resting in the same way. In this case we must fain call it apparent dementia.

The next part of my subject—a brief reference to what may be called the ordinary forms of mental disorder—is, I think, less likely to give rise to any differences of opinion. First there is mania, the loss of higher mental control, which really extends from delirium to hysteria. As Jackson has pointed out, the removal of the higher control facilitates the demonstration of the lower activities of mind and also allows them to assert themselves in an abnormal manner. I am inclined to think there is an increase, though not a very large one, in the cases of acute delirious mania—grave delirium, as it has been called. This disease is doubtless the result of some toxic influence and will furnish evidence of what I have said elsewhere that anything which will produce temporary delirium may give rise to delirious insanity. It may follow infectious fevers, alcohol, or some auto-toxins, arising, I have little doubt, in many cases from initial brain changes. I think, judging from my own personal experience, that the result—or, at any rate, one of the results—of reduced consumption of alcohol is that there are found fewer cases of grave delirium arising from or following delirium tremens. As to ordinary mania, the general opinion I find among the metropolitan asylums is that there are fewer cases of simple mania than formerly, and that certain forms of mental disease which used to begin with mania are now more commonly seen in a melancholic state. This is said to be the case in adolescent insanity and also in general paralysis of the insane. This conclusion has by some been attributed to the part played by influenza in starting the neurosis, for there is no doubt that, as a rule, melancholic states are more common after this disease.

Next as to melancholia. You will gather from what I have just said that my own experience, which appears to be supported by that of most asylum physicians, is that there is an increase of melancholic patients and also of melancholic *symptoms* in the various forms of insanity. The self-conscious youth is religiously depressed. The girl with amenorrhœa is contrite and self-accusing. Middle-aged men and women are suspicious and doubtful as to their social position or their conduct in the past; with advancing years comes a dread of poverty and the workhouse, and perhaps the desire to leave a world where they feel that they have already begun to outlive their welcome.

The next general form of insanity, to which I have already several times referred, is so wide and so far-reaching that I am not surprised to find an almost universal belief in its increase. Dementia is the termination of many forms of insanity. As I have already pointed out, we have to deal with the fact that the insane live much longer than they did: they remain till the end in asylums and are frequently recognised in statistics. Again, a tendency to senile disorders leads naturally to an increase of senile dementia. So there are more old people to become insane and the insane live long enough to become old. I have little doubt that the various types of youthful disease tend more rapidly to mental weakness than they did in former years, but this is rather a belief than a proved fact. As to the various forms of dementia—such as those depending on syphilis, general paralysis, or alcohol—some are increasing, others are stationary, at present.

Under the head of "functional disorders" I referred to the truly neurotic insanities and I stated my conviction that they were increasing. I would point out that here again we ought to be on our guard. For it is pretty certain that these persons also accumulate in the asylums and live longer lives there. I certainly think myself that many among such persons might be allowed to live free at least from asylum control. I have not referred to the large class of idiots, imbeciles, &c., as I do not personally claim enough knowledge to speak about them. I do not, however, think it can be denied that there is a very large and probably increasing group of social failures, the failure depending on some nervous want. Some of these are physically unfit, others are wanting in their senses, while many are morally weak and unfit for ordinary social life. Whether these are increasing in proportion to the population I cannot say, but that in the future they will have to be seriously considered I do not doubt.

And now to sum up shortly what I have been aiming at to-day. I have desired to make it clear that I cannot accept any definition of insanity as a disease. I have endeavoured briefly to delineate its social, legal, and medical aspects, each of which differs from the other. I have referred, in the time at my disposal, to the forms of mental disorder which appear to be the most interesting and worthy of consideration at the present moment. I have expounded my belief in the existence, or the non-existence, of a pathology for such cases, and I have given a few details here and there as to the increase of the various groups. If I should be considered to have expressed too hasty a conviction in regard to certain cases, which, being out of harmony with their surroundings and obnoxious to society, are in our day treated as aliens: I would nevertheless repeat my opinion that although insanity cannot be predicated of that which is neither a mental nor a physical organism, although I cannot go so far as to say that the insanity lies in the environment itself, yet in not a few cases the actual source, and especially the sustenance of the disorder, do lie in the surroundings rather than in the patient; and to a judicious and well-advised modification where possible of the surroundings and circumstances only can those interested look, with any prospect of success, for the desired safety, convalescence, or cure.

An Address
ON
THE RELATIONS OF LARYNGOLOGY AND RHINOLOGY TO GENERAL PRACTICE.

Delivered before the Medical Society of University College Hospital on March 13th, 1907,

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MR. CHAIRMAN AND GENTLEMEN,—Whilst specialism in medicine has never enjoyed the favour of the profession in this country, laryngology and rhinology from their very inception as a special branch have been particularly unfortunate in this respect. When 30 years ago I began to practise as a specialist laryngology was indeed in a sorry plight, both so far as its popularity and its official recognition were concerned. The laryngoscope was almost universally looked upon as "a physiological toy"; special provisions for teaching its use had been made in hardly any of the general hospitals; throat departments, where they existed at all, were placed under the care in rotation of members of the assistant staff, special knowledge of laryngology evidently not being looked upon as a necessary requisite for teaching it; the special hospitals were altogether under a cloud, and the most prominent representatives of laryngology in anything but high favour with their fellow practitioners. A lurid illustration was given of the general feeling existing towards laryngology at that time by an address on "Specialism in Medicine" oddly enough delivered before this very society in 1881[1] by a respected leader of the profession, from which I quote the following significant passage:—

> "There are many other points on which I should have liked to speak to you, of the specialisms that have so limited an area, that it is quite impossible for any man, who is restricted to any of them, to make an income, unless he does so by inducing his patients to pay him needless visits; such, for example, as to touch his throat with something every day, to turn the screw of his 'instrument for the back' two or three times a week, or to do something to the Eustachian tube with equal frequency. But what I have said is enough to guard you, I hope, from falling into these mistakes, these 'worse than crimes, these blunders.'"

Although these statements were not allowed to pass unchallenged, and although the author himself deemed it prudent subsequently to modify his violent attack, there is no doubt that his remarks accurately enough represented the general feeling with which laryngology—rhinology was then hardly out of its teens—at that time was looked upon in this country.

That a subject, which was thus held in ridicule and even contumely by the leading spirits, should not have met with much acceptance amongst the rank and file of the profession is but natural. Indeed, without much exaggeration it might be stated that, unless some palpable lesion, such as considerable enlargement of the tonsils, was present the treatment in those times of throat affections of any kind on the part of the general practitioner was of touching simplicity and uniformity. First of all, a gargle of some kind was prescribed; then, if this had been of no avail, the patient was given some glycerine and tannin to paint his throat with; next, the practitioner himself painted his client's throat with a solution of nitrate of silver; and, finally, when this too had failed, the uvula was amputated. Indeed, I am not quite sure whether one can speak of this period as entirely past and gone.

Already at the time, however, when the just quoted scathing criticism was passed the outlook had become somewhat brighter. In glancing over an old paper of mine on the treatment of acute and chronic laryngitis in adults[2] I find that in 1880 I ventured to predict that laryngology in not too distant a time would occupy a position equal to that of other recognised specialties, and this prophecy began to be fulfilled already in the following year when at the London International Congress of Medicine the work of the subsection of laryngology, which was the first official recognition of the legitimacy of laryngology as a special subject, convinced a good many former opponents that there was more inherent good in it than it had so far been credited with. Since then a quarter of a century has elapsed, and the question may now fairly be asked whether my prediction has come true in all respects. Well, it can, of course, not be denied that we have made a good deal of progress all along the line. The disdain in which laryngology was held has to a great extent given way to a better understanding. Questions of personal unpopularity of its representatives are no longer allowed to influence an appreciation of the subject itself. Special departments for throat diseases nowadays exist in all the large London hospitals and are in most of them confided to the care of specialists, and the special hospitals have emerged from the unpleasant position they held 25 years ago. Further, a special section for laryngology and rhinology is now granted in conjunction with otology at all the meetings of the British Medical Association, and there will be a section of laryngology and rhinology in the Royal Society of Medicine, which is now in process of formation, whilst up to the present the special subject has been cultivated in two societies devoted to its study.

Thus, certainly, considerable advance has been made since 1881. Candour, however, compels me to say that much still remains to be desired. Even now specialists are but too generally considered as belonging to a lower grade in the medical hierarchy—as if a man, who confined his labours to a limited sphere, and did lasting good work in this, was not as good as one who worked on many subjects without achieving distinguished success in any of them! But this consideration does not seem to be generally admitted. Witness the rarity with which positions of honour are accorded to laryngologists in the colleges and at the medical societies; anomalous restrictions are still placed at some hospitals upon the incumbents of the throat departments preventing them from performing external operations, so that the ridiculous position may be, and indeed has been, engendered that a man who holds the record of the world for a particular operation is not allowed to perform it at his own hospital; and finally, and worst of all, the importance of the subject for their future practice is not made clear to the students, there being no compulsory attendance of stated duration at the throat departments, nor any certainty that the knowledge of the candidate with respect to this special branch will be tested at any of the final examinations.

When I speak like this, gentlemen, I am afraid that you will look upon me as one of those well-meaning but ill-advised persons who endeavour to burden still further the already over-burdened student, and this, indeed, has been the motto under which my repeated requests for compulsory attendance at the throat departments and testing of the candidate's knowledge at the final examinations have been declined by two of the examining bodies with which I am connected. But, gentlemen, believe me, nothing could be further from my intentions than to do such a hateful thing as to throw additional burdens upon you. The remedy for what I conceive to be the at present somewhat anomalous condition of medical education in this country lies, in my humble opinion, in a readjustment of the curriculum and in considerably more time being given to the study of those subjects which will be of practical importance in the life of the future general practitioner, whilst those subjects which though admirable in themselves are of little or no use for general practice, and are as a rule almost immediately forgotten when once the examination has been passed, should be proportionately restricted to their proper limits.

This is not the occasion to enter further upon this subject beyond saying that fortunately I do not stand alone, but that the justice of what I have just been saying is now being generally recognised, and that a strenuous effort is being made just at this moment to bring home to the authorities the necessity of a change in the sense that greater scope should be given to clinical medicine during the curriculum. What we want is not, of course, to educate our students to be specialists in every branch. Such an undertaking would be impossible in view of the limits of the time of study. But it ought to be possible, as it has been found to be in other countries, to teach sufficiently every student the use of the instruments of precision to be able to diagnose simple and straightforward cases of any kind, and not through ignorance of these methods to let cases, which at their commencement would have been perfectly amenable to treatment, slide until they are past help and recovery. That the laryngoscope

[1] THE LANCET, Oct. 15th, 1881, p. 655 et seq.
[2] Brit. Med. Jour., Jan. 24th, 1880.

and rhinoscope belong to these instruments of precision I hope to be able to show you from a few examples which graphically illustrate their importance.

If it were only for the sake of the laryngeal complications of tuberculosis, every practitioner ought to be able to discern for himself in a case in which a phthisical patient complains of his throat, whether there are actual tuberculous lesions present in the larynx or not. The fact has been ascertained by reliable statistics that every seventh person in this world dies from pulmonary tuberculosis. Again, it has been found that every fifth person suffering from pulmonary tuberculosis has got a laryngeal complication. Thus, in other words, on the average every thirty-fifth person coming under your care will be found to be afflicted with a serious complication of one of the most serious maladies we have to deal with. And this complication does not merely arise in the last stages of pulmonary tuberculosis, but is present in an unexpectedly large proportion already at its commencement. Last autumn I had, as a member of the consulting staff of King Edward the Seventh's Sanatorium at Midhurst, to pay my first visit of inspection to that institution. At that time there were 67 inmates in the sanatorium. Not less than 17 of these—I found to my own surprise—were shown to me as suffering from their throats in one way or the other, and of these not less than 14 were found to have genuine laryngeal tuberculosis. This number practically corresponds to the general percentage of laryngeal complications in pulmonary tuberculosis which I have given you. But the surprising thing is, that—admission to the sanatorium being strictly limited to the very early stages of pulmonary consumption—the proportion of laryngeal complications should have been so great already in these early stages. In almost all these cases it was possible to hold out a hope that with complete vocal rest and appropriate local treatment in some of them it would be possible to arrest the laryngeal complication. Three weeks ago I again inspected the sanatorium. The *personnel* of the inmates meanwhile had, of course, considerably changed, but the percentage of throat complications at the time of my visit was exactly the same—viz., 20 per cent.—and, what was most pleasing, in a good number of the patients afflicted with laryngeal tuberculosis, whom I had seen on the occasion of my first visit, considerable improvement or even arrest of the disease had been obtained. It may be found, of course, on longer continued observation that the percentage of laryngeal complications in these early stages is somewhat smaller than it was on the occasion of my two visits, but even if this were so, are not the facts just stated alone sufficient to show you the importance of the laryngoscope and to justify my demand that every practitioner should be acquainted with its use?

Let me give you another illustration. A few weeks ago I introduced a discussion on the diagnosis and treatment of laryngeal cancer at the Medical Society of London. In my introductory remarks I stated that I had seen in private practice between October, 1887, and December, 1906, 212 cases of malignant disease of the larynx. Of these 136 were intrinsic and 76 extrinsic or mixed. (I should state here that according to general custom all cases of malignant disease of the larynx are nowadays divided into two large classes—viz., the intrinsic, which comprises the cancers originating within the laryngeal cavity, and the extrinsic, which comprises those cases in which the disease is situated on the epiglottis, aryepiglottic folds, or the œsophageal aspect of the cricoid cartilage.) These two classes diametrically differ from the therapeutic aspect, inasmuch as the intrinsic variety, if only diagnosed early enough, permits of a prognosis better than that of cancer in almost any other part of the body. Indeed, I was able to state that of the 25 cases of intrinsic cancer of the larynx, which I had operated upon by means of thyrotomy, not less than 80 per cent. had been lastingly cured. Most of these patients have a good or fair, a large proportion an astonishingly good, voice, and hardly any of them is prevented from following his previous occupation.

Extrinsic cancer of the larynx, on the other hand, can only be attacked with any prospect of success by total laryngectomy and removal of the cervical glands. The mortality from this operation, although no longer so appalling as it was some years ago, is still considerable—viz., 19 per cent. Recurrence according to the latest statistics takes place in 24 per cent. and life in the great majority of cases, which have been successfully operated, is anything but pleasant, the patient being deprived of the power of ordinary speech and reduced to a pharyngeal whisper, whilst in not a few cases difficulty in swallowing is also present. Thus you see that the prospects of the two classes of laryngeal cancer are, indeed, as I just stated, extremely different from one another.

After the meeting in which I had stated my experience a distinguished laryngologist asked me how it was that I had seen so preponderating a proportion of intrinsic cases whilst he in hospital practice had found an almost inverse preponderance of extrinsic cases. The explanation I was able to give him is extremely simple; he refers to his hospital practice, whilst all my statistics relate to my private practice. Now there is the great difference between these cases in private and in hospital practice, that whilst in the former patients who are troubled by nothing else but by persistent hoarseness—which in the great majority of cases is the first and for a long time the only symptom of this variety of the disease—consult their general attendant or a specialist already at an early period of the disease, hospital patients, as a rule, do not take any notice of such hoarseness and allow the insidious disease to go on, until it passes over the confines of the larynx proper, when pain, difficulty in swallowing, enlargement of the cervical lymphatic glands, and general cachexia are induced, and when the case no longer belongs to that class in which the simple operation of thyrotomy will cure them, but when the much graver recourse to total laryngectomy represents the only possibility of saving them.

Here, then, is another illustration of the necessity of the use of the laryngoscope in private practice. You ought not to be satisfied when a middle-aged patient comes to you complaining of hoarseness of several weeks' duration, for the occurrence of which he can give no explanation, in assuming, without making a laryngoscopic examination, that he is merely suffering from a laryngeal catarrh. You ought to use your laryngoscope, and when you find congestion limited to half of the larynx only, or a suspicious thickening, or a distinct outgrowth from one vocal cord, send your patient at once to a competent specialist in order not to lose precious time. Many a valuable life will be saved, and indeed has been saved, by such prompt recognition on the part of the general practitioner, in whose hands, indeed, in the majority of these cases lies the patient's fate.

One more fact will illustrate the same point. A patient may come to you with various vague complaints about early fatigue, pains in his head, chest, or abdomen, shortness of breath on exertion, and similar nondescript or ambiguous symptoms which may be due to an immense variety of causes. You carefully examine him in the approved manner, you find no organic change to explain these symptoms, and you console him and yourself with so cheap a diagnosis as that of his "being out of sorts" or "neurasthenic," &c. Yet, if you had included amongst your investigations an examination by means of the laryngoscopic mirror you might have found one sign positively characteristic of organic disease, and at once drawing your attention to quite a variety of serious organic affections, of which its appearance may be, and often enough is, the first and for a long time the only demonstrable sign, viz., abductor paralysis of one vocal cord. The mere enumeration of the principal of these diseases—tabes dorsalis, syringomyelia, amyotrophic lateral sclerosis, bulbar paralysis, pachymeningitis, aneurysm of the arch of the aorta, malignant mediastinal tumours, pleuritic thickening of the apex of the right lung, œsophageal carcinoma, &c.—will suffice to show you the enormous practical importance of this sign, which is so easy to detect but which must be sought for in order to be detected, as it does not reveal itself either by changes in the voice or in the respiration.

It would be easy to multiply the number of examples demonstrating the value, nay, the necessity, of the use of the laryngoscope in general practice. Thus, I just mentioned that hoarseness often is the first, and for a long time the only, symptom of intrinsic laryngeal cancer. But apart from this, consider what a multifarious significance that symptom, which so often brings the patient to the medical man, may have. Hoarseness may be a sign of a simple catarrhal process, of laryngeal tuberculosis, of syphilis, of the existence of an innocent or malignant growth in the larynx, of laryngeal paralysis, of the impaction of a foreign body in that part—in fact, of conditions as different in kind as in requiring different treatment. To treat such symptoms in mere routine fashion by prescribing an inhalation, or a spray, or an expectorant

without even looking at the larynx means, bluntly speaking, neglect of duty, and exposes, I need not say, the practitioner if the real cause be afterwards detected by somebody else to the reproach of carelessness or ignorance. The same applies to laryngeal dyspnœa, which may, as you know, be due to such different causes as œdema of the larynx, perichondritis, tuberculosis, syphilis, or malignant disease, laryngeal neoplasms, spasm, bilateral paralysis of the abductors, impaction of a foreign body, external compression, stenosis remaining after diphtheria or typhoid fever, fractures or injuries—conditions again, as you see, as widely different from one another as could be, and in most cases reliably differentiated only with the help of the laryngoscope.

Turning now to affections of the nose, let me remind you in the first place of the great influence exercised by stenosis of the nose and naso-pharynx upon the general health and more particularly upon the tendency towards catarrhal affections of the air passages. Perhaps no progress made within the last 40 years in the field of laryngology and rhinology has more thoroughly influenced the minds and has more generally entered the thoughts of the bulk of the profession than the effect of the most frequent form of naso-pharyngeal obstruction—viz., of adenoid vegetations—upon the general development of children. It is fully and generally recognised nowadays that chronic obstruction of the naso-pharynx during childhood not merely brings about such unpleasant results as mouth-breathing, frequent colds in the head, and periodical or permanent deafness, but that it also leads, when long continued, to insufficient oxygenation of the blood, deficient development and deformity of the thorax, and to mental bebetude, leaving alone the fact that the unhealthy condition of the naso-pharyngeal mucous membrane predisposes towards infection of different kinds, and that if such infection has taken place it is apt to run a more severe course and more particularly to cause ear complications. But apart from adenoid vegetations the importance of stenosis of the air-passages proper is of such a character as to force itself time after time upon the mind of the thoughtful practitioner. When you once enter upon private practice you will find that the graver diseases of mankind to which your attention is more particularly devoted during your years of study fortunately are not those with which you have to deal most frequently, and that affections which you have been apt to consider as trivial during your student years after all occupy a much larger part of your daily work. Amongst such trivial complaints of which you are likely to hear almost daily in your practice perhaps none will be more frequent than that about a particular tendency "to catch cold." "I catch cold on the slightest or on no provocation," you will be told, "and every cold directly flies to my throat and chest." In a large number of the patients consulting you for that complaint you will find on examination the typical face of the mouth-breather, with oblong configuration of the head, pinched nose, retracted upper lip, and prominent incisor teeth. They may give you a history making the presence of adenoids in childhood very probable. You elicit the fact that the patient always keeps his mouth open, snores at night, and awakes with his throat parched and dry. On examination you find, apart from the symptoms of general catarrh of the upper air-passages, genuine nasal stenosis due in some cases to general narrowness of the parts, more frequently, however, to deviation of the septum or enlargement of the turbinates, or a combination of both these changes, associated possibly with abnormal steepness of the hard palate. No remedy is, in these circumstances, likely to diminish the catarrhal tendency, unless proper nasal breathing is restored. That judgment in these cases is required goes without saying; to attribute every cold to nasal stenosis and to proceed by means of operation against perfectly harmless small excrescences from the nasal septum or slight enlargement of the turbinates, which do not in the least prevent the patient from breathing freely through his nostrils, is just as injudicious as to hold every slight amount of lymphatic tissue in the naso-pharynx as responsible for every kind of obscure neurosis in the body and surgically to proceed against it as being the certain cause of those nervous disturbances. But when proper caution is exercised, cases enough still remain in which the catarrhal tendency will really be benefited by the restoration of nasal breathing, and the attainment of this desirable purpose rests in the first place with the diagnostic powers of the general practitioner.

Exactly the same obtains with regard to the affections which I select as a final example of the importance of the general practitioner's knowing something of laryngology and rhinology—viz., empyema of the accessory cavities of the nose. I do, of course, not speak in this connexion of those cases of empyema of these cavities in which urgent local symptoms cry out, as it were, for attention on the part of even the most casual observer, but I refer to those categories in which either there is no, or very little, periodical discharge (latent empyema) or in which nasal discharge has become, as it were, so much a part of the patient's existence that he either does not refer to it at all, or only incidentally, when consulting his medical adviser for what appears to him a trouble of a very different kind. In the first of these two categories (cases of latent empyema) the patient's only complaints may be headache or neuralgia (permanent or periodical, general or more frequently limited to the frontal region, vertex, or the occiput, according to the cavity affected), combined in more advanced cases with eye troubles, general depression, loss of memory, or somnolence; in the second class, in which, particularly during sleep, there is more or less continuous drainage of pus into the stomach and auto-infection of the system, the complaints may only refer to grave dyspepsia and general feeling of being unwell. If, in the first of these categories the practitioner is satisfied with treating his patient as neurasthenic and with ordering simply change of air and residence, sedatives, &c., and if, in the latter, he looks upon the disease as originating from, and confined to, the digestive organs, and treats the patient accordingly, he will, needless to say, never be able actually to cure him, and will sooner or later in all probability have the chagrin of finding that he leaves him to seek other aid. If, on the other hand, in cases of this kind he thinks at an early period of the possibility of a nasal origin of the obscure headache or dyspepsia, and either succeeds in diagnosing himself the existence of an empyema, or sends his client for confirmation of his suspicion to a specialist, who confirms it, he may be sure that this proof of his diagnostic acumen will greatly redound to his credit in the eyes of the patient and his friends.

The foregoing examples will suffice, I trust, to convince you, gentlemen, that an acquaintance with matters laryngological and rhinological, even though these branches do not yet occupy in the medical curriculum and in the final examinations the position which they deserve, is nowadays indispensable for the general practitioner who does not wish to be left behind in the struggle for existence. That no undue demand should be made with regard to the extent of this knowledge I heartily admit. In a previous part of this address I have expressly stated that it is an impossibility to educate our students within the time of the official curriculum to be specialists in every branch of medical science, and I am further fully aware that similar claims to those raised for my specialty could with equal reason be adduced on behalf of many other of the special branches. But it is not necessary that every general practitioner should be a specialist for everything. He will do justice to himself and to his patients when he possesses sufficient knowledge to diagnose and treat simpler cases himself, and to recognise at a sufficiently early period in difficult and obscure cases that further help is required. In the words "at a sufficiently early period" lies the whole crux of the question. The time ought to be over when a patient with beginning cancer of the larynx is sent to a watering place, when a beginning bulbar paralysis is treated with amputation of the uvula, when a tuberculous ulceration of the larynx is allowed to extend until it is past the limits of possible help, when an empyema of the frontal sinus remains unrecognised until caries and necrosis of the walls of the cavity occur, accompanied by meningitis or encephalitis. Not in treating for an indefinite length of time an obscure case with all possible remedies without endeavouring to establish the correct diagnosis lies the wise policy of the general practitioner, but in calling in help at the time when help can still be given.

Here the big question of the proper relations of the consultant and the general practitioner opens, and although this question is, of course, much wider than the immediate purpose of this address, the subject of the latter is so inseparably bound up with the general question that I trust you will bear with me if, in conclusion of my remarks, I dwell for a few minutes on one aspect of this all-important topic which is of particular interest in connexion with my observations. More than once I have emphasised in the course of my remarks the impossibility of educating our

students to be specialists in everything. This, however, I trust will not be understood by any of you as meaning that I wished to relegate the general practitioner to the humiliating position, that he should only prescribe for colds and stomach-aches, and that for the rest he should merely act as an adviser as to who should be called in, when the matter became slightly more serious or obscure. It would be an evil day for the science and art of medicine, and for the self-respect and sense of responsibility of the general practitioner, if such became the general practice. But what I contend he ought to know is: the limits of his own knowledge and that he ought to act upon this recognition of his own limitations. It is not a sign of strength, but of weakness if a practitioner misguided by a false sense of shame obstinately refuses to recognise that he has arrived at the end of his own powers, and if with equal obstinacy he refuses to let his patient have the benefit of further advice in conjunction with himself. Apart from the grave responsibility thus engendered, he certainly does not strengthen his own position by such a short-sighted policy. The times are fast approaching their end when the patient consented to be looked upon as a piece of property on two legs, and nowadays when he finds that his general medical adviser has done him no good by a prolonged course of treatment, and has neither suggested himself nor received with favour his own timid suggestions as to a consultation, he takes his fate into his own hands and clandestinely consults someone else. Remember, gentlemen, it is his own usual medical attendant who has driven him to adopt that course!

Here the difficult task of the consultant begins, a task not rendered any the easier by the wholly or partly erroneous views, which unfortunately appear to be entertained on this point by a good many general practitioners. It seems to be thought by them that the patient who comes on the sly to the consultant begins the conversation by saying: "I have been under the care of Mr. So-and-So for a long time and am still under it, but as he does me no good I have come to see you." Now let me assure you, gentlemen, on the strength of nearly 30 years' experience as a consultant, that a patient introduces himself in such a manner on the rarest of occasions only, when every decent-minded consultant would at once interrupt him and say that as he was still under Mr. So-and-So's care he (the consultant) could only see him with the general attendant's knowledge and consent. But, as a matter of fact, in the great majority of all cases the patient either begins by at once telling the consultant the symptoms of his complaint or he states that he had received certain advice with regard to an operation or other form of treatment and that before consenting to it he wished to take a further independent opinion, a course to which I think he is fully entitled. In not a few cases he merely asks to be examined, in others he positively denies having a general medical attendant; again in others he may tell you that he had suggested a consultation but that this had been declined, or say that he was not satisfied but did not wish to hurt his feelings, and had given up attending his usual medical attendant, &c. Frequently enough it is quite impossible to ascertain the true condition of things. In fact, the number of contingencies is so great that I believe no code of ethics could be compiled in which they were all satisfactorily provided for. The consultant, therefore, must depend in almost every individual case upon his own judgment, tact, good fellowship, and desire to avoid making mischief. In a goodly proportion of cases he will find, of course, that the patient has been quite correctly treated, when it will give every honourable consultant the greatest pleasure to tell the patient so and to encourage him to continue with the treatment adopted by his general medical attendant. Not much good, I think, could come from the consultant's communicating in such circumstances with the general practitioner and, on the contrary, mischief might be done, inasmuch as the general attendant's susceptible *amour propre* probably would be still further wounded and a feeling of distrust be engendered in his breast against his patient. I think it, therefore, wisest and kindest for the consultant to treat such a consultation as a passing episode, after which the patient will, with renewed confidence, return to his ordinary medical attendant. But the course to be followed becomes infinitely more difficult and delicate when the consultant after examination arrives at the conclusion that a mistake has been committed with regard to either the diagnosis or the treatment of the case or to both. His *esprit de corps* forbids him to disparage the opinion of the usual medical adviser, his duty towards the patient commands him not to let the latter continue under what he considers a mistaken *régime*. The obvious way out of this difficulty would seem for him to communicate with the general medical attendant, and to this course I have found in long experience the patient almost always, even if at first feebly protesting, ultimately consents, if it be explained to him that his case was not one for a casual stealthy consultation behind the back of his general medical attendant, but for hearty coöperation between the latter and the consultant. To this most natural proceeding, however, opposition has arisen in a quarter in which one should have least expected it; instead of appreciating that such communications are made not only in the patient's but most certainly in the general attendant's interest as well, some general practitioners violently resent what they call "unrequested advice," and many more, alas, have not a word of thanks for the consultant, who has endeavoured to keep for them patients who often enough were on the point of leaving them altogether when seeking independent advice! It is truly difficult to understand this mental attitude, but if proofs were wanted to show its actual existence I need only refer you to a correspondence on the ethical aspects of medical consultations which has taken place within the last few weeks.[2] Personally I have been lucky enough to escape the "acrimonious and insulting replies" which have fallen to the lot of many a consultant, who wrote with the best of intentions to the practitioner in attendance, when the latter's patient had clandestinely consulted him, but speaking from memory I must say, with sincere regret, that in by far the larger part of all the letters I have written in former years in similar circumstances I have received no reply at all! Experiences of that kind do not encourage a man to continue in taking a good deal of trouble when the latter apparently is so little appreciated! It is my custom now, when I see a case in which in the course of the consultation it becomes apparent that the patient has been, and possibly may be still, under the care of another man, and in which I think that the latter in the patient's and in his own interest ought to know my own views, to tell the patient that if his medical attendant should wish to know my opinion and would write to me in that sense I should be very happy to report to him. The adoption of this course enables me to fulfil my duties towards both the patient and the general practitioner without exposing me to unpleasantness. Still, I am far from thinking that this course affords a healthy and truly satisfactory solution of the question. Yet it ought not to be difficult to solve it satisfactorily. All this internecine bickering would be done away with and a much more cordial feeling created between general practitioners and consultants if the former would only credit the latter with their true motives in writing to them about truant patients whose cases require further consideration.

In the cordial coöperation of the consultant and of the general medical attendant lies the true interest of everybody concerned. That this general principle, from the nature of the diagnostic and therapeutic questions involved, applies with particular force to the relationship of laryngology and rhinology to general practice I have endeavoured to illustrate to-night.

[2] Brit. Med. Jour., March 2nd, 1907, p. 534.

THE Medical Graduates' College and Polyclinic held its annual general meeting at 22, Chenies-street, London, on March 22nd, under the chairmanship of Dr. C. Theodore Williams. The annual report and balance-sheet, which were unanimously adopted on the motion of the chairman, showed that the polyclinic was in a prosperous condition and that its financial condition and other interests only require the individual assistance of its members and subscribers to enable the Council to widen the scope of the work and to increase the usefulness of the institution. In 1906 there were 14,528 attendances of medical men and 1164 cases of disease, many of them of extreme rarity and interest, were shown at the various clinics. In addition there were held four sessions of practical classes and one vacation course of three weeks attended by 198 practitioners. The medical superintendent of the polyclinic, Captain A. E. Hayward Pinch, was heartily congratulated on the success of the college.

ABSTRACT OF

The Goulstonian Lectures

ON

CERTAIN ACUTE INFECTIVE OR TOXIC CONDITIONS OF THE NERVOUS SYSTEM.

Delivered before the Royal College of Physicians of London

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LECTURE III.[1]

Delivered on March 12th.

MR. PRESIDENT AND GENTLEMEN,—Having devoted the whole of my second lecture to the consideration of acute poliomyelitis, I have left myself but a meagre allowance of time for the discussion of the remaining and less common diseases of my group—namely, acute ascending myelitis, Landry's paralysis, and acute toxic polyneuritis. The task of dealing adequately with these morbid conditions in the time at my disposal would have been an impossible one if it had been my object to describe them in a systematic manner. My purpose, however, is, as I have already told you, of a different nature, and I shall merely place before you the results of my own observations, and the grounds for my belief that there are features, clinical as well as anatomical, by which these three maladies can be differentiated.

ACUTE ASCENDING MYELITIS.

It is a matter of some difficulty to choose between the terms "acute ascending myelitis" and "acute disseminated myelitis" because the one is probably better supported from a clinical and the other more appropriate from a pathological point of view, but I have chosen to include the word "ascending" for the reason that it graphically suggests the prominent characteristic of the disease. "Acute ascending meningo-myelitis" would do equally well and is in most cases, at any rate, more correct. Reference to the meningitis is, however, no more necessary here than is reference to the pleurisy which undoubtedly complicates the great majority of cases of pneumonia.

Let me introduce the subject through the medium of a case. A bricklayer, aged 44 years, was admitted to the National Hospital for the Paralysed and Epileptic on August 14th, 1903, under the care of Dr. J. S. Collier. The patient's previous health had been good in every way and no evidence could be obtained either of venereal infection or intemperance. On August 3rd, 4th, and 5th he had noticed dull pain about his chest, especially between his shoulders, and on the following day he experienced some weakness of his legs, although he was able to continue his work. Leaving his bed on August 7th he was conscious that his legs were numb and he found that he could not empty his bladder, but was able to walk a quarter of a mile. Inability to climb a ladder caused his return home and on the next morning he was unable to stand. On the 9th he did not suffer any inconvenience when pins were inserted into the skin of his legs or abdomen and all power of moving his lower extremities had disappeared. Three days later he suffered from pains shooting down his arms, and this was followed within 24 hours by paresis of those limbs.

On admission to the hospital the patient was found to be a large, robust, and well-nourished man, completely unable to move his legs, to sit up, or to turn over in bed. The skin covering the trunk and limbs was pale and dry, a well-marked tache being obtainable on stroking. On the other hand, his face and neck were flushed and moist with perspiration. His lips and tongue were furred, foul, and dry. Mentally, the patient was clear but somewhat apathetic. The temperature was 101° F., the pulse was 72, and the cardiac condition was normal. Respiration was shallow, regular, chiefly diaphragmatic, and recurring about 28 times a minute. There was no spontaneous cough and attempts to produce one were feebly carried out. The abdomen was distended with flaccid walls, nothing abnormal being detected on palpation. After much aperient medicine a continuous and uncontrolled expulsion of fluid fæces was obtained. The urine, which had to be withdrawn by catheter, was scanty, high coloured, acid, and of a specific gravity 1030; it contained some albumin but no sugar. Examination of the function of the cranial nerves revealed no abnormality. The patient was able to turn his head from side to side and to raise it from the pillow in rather feeble fashion, but he could shrug his shoulders with fair strength. Both arms displayed complete flaccid palsy of movements at the wrists and finger-joints, whereas some diminished power of moving the limbs at the elbow and shoulder was still present. No wasting, tremor, or muscular fibrillation was observed. Respiration was carried on by the diaphragm and accessory muscles, the intercostal and abdominal muscles being totally paralysed. The legs were flaccid and quite powerless throughout but no atrophy was evident. The muscles everywhere responded normally to electrical currents. On the sensory side it was elicited from the patient that he had suffered from pain in the back and chest, with a feeling of tightness and burning around the lower abdomen, associated with numbness and tingling over the legs which gradually extended up the trunk. At the time of admission he was conscious of numbness from the feet to the nipples and a dull diffuse pain in the back. On testing his cutaneous sensibility it was discovered that prick and touch were unperceived up to the level of the nipples and only partially recognised as high as the fifth cervical root area, the right arm being more insensitive than the left. The sense of position was lost in all four extremities and no tenderness was present on squeezing the muscles. All deep and superficial reflexes were absent in the trunk and limbs, the jaw jerk, however, being easily obtained. On August 15th, the day after admission, moist sounds were audible in the lungs and the arms and respirations were more feeble. I inoculated culture tubes with the cerebro-spinal fluid by means of lumbar puncture and with blood from a vein which I opened under strict aseptic precautions. Death took place from respiratory failure early the following morning, less than 13 days from the first symptoms of pain and less than ten days from the earliest signs of paresis. During his stay in the hospital the patient's temperature varied between 101° and 102·4°.

Twelve hours after death I performed a necropsy, finding rigor mortis present, the body well nourished, and the abdomen markedly distended. The dura mater was normal in appearance, the leptomeninges, on the other hand, being intensely congested, although free from visible exudation or pus. The spinal cord was softer than usual throughout its length but from the tenth dorsal segment to the lower cervical region almost diffluent in consistence. On transverse section in this part it was impossible to distinguish white from grey matter and dark brown patches suggestive of extensive hæmorrhages were seen scattered about. Beyond general hyperæmia the brain presented no abnormal features. The left sciatic nerve was rather soft and fatty and the muscles appeared healthy. The heart and liver were normal, the lungs and kidneys were congested, and the spleen was soft, large, and deeply coloured. At the necropsy I inoculated culture tubes from the heart blood, cerebro-spinal fluid, and spinal cord.

The results of the bacteriological investigation during life and after death may be conveniently considered at once. Part of the cerebro-spinal fluid taken during life was centrifugalised and the very scanty deposit was examined. It contained few cells but some organisms which are best described as diplo-bacilli—very short rods with rounded ends placed end to end, generally in pairs but sometimes forming irregular chains. Cultures from the cerebro-spinal fluid were sterile. Cultures from the venous blood extracted during life produced in broth only a slight turbidity and smears showed a diplo-bacillus resembling the one already described except that they appeared to be somewhat larger and stouter. All efforts to subcultivate the organism failed. All culture tubes inoculated post mortem proved sterile except the broth tube from the spinal-cord substance which again grew a scanty and short-lived organism resembling the one obtained from the venous blood during life. The organism I have referred to retained Gram's stain badly. Owing to failure in subcultivation I have no knowledge of its cultural characteristics and the only point of importance is the fact

[1] Lectures I. and II. were published in THE LANCET of March 16th (p. 705) and 23rd (p. 785), 1907, respectively.

that the bacillus was found in the blood and cerebro-spinal fluid during life and the spinal cord after death. With regard to its causal relationship with the disease it is unwise to speculate further but it is well to remember Homen's experience which I referred to in my first lecture. That investigator was unable to find organisms in the cord more than a few days after their injection and I may add that in my case the search for bacteria in stained sections of that organ was unsuccessful.

Microscopical examination.—The parts examined included various levels of the brain and brain stem, the spinal cord, some peripheral nerves and muscles; the Nissl, Löffler's methylene blue, Busch, logwood and eosin, or van Gieson methods were employed. I may say at once that no changes were found in the sciatic nerve or in the anterior tibial muscle, and that changes in the central nervous system did not extend higher than the lower part of the pons. Speaking generally the most marked disease was found throughout the dorsal and lower cervical region, less marked disease in the remainder of the cervical region and medulla, and least disease in the lumbo-sacral enlargement. Taking this fact along with the clinical history of the case it is justifiable to assume that the morbid process originated in the lower dorsal region and spread upwards with somewhat fading intensity after reaching the cervical region as high as the bulb. At every level foci of acute inflammation were present, either confluent over the whole of a transverse section, as in some parts of the dorsal region, or discrete and irregularly scattered, as in the cervical segments. The incidence of these patches was chiefly on the white matter and especially on the posterior columns, but in the dorsal region the condition was so general that it was often impossible to differentiate white from grey substance or to detect any remains of the central canal. Whether the lesion was in the white or grey matter the essential characteristics were similar and it will be sufficient to describe one or two typical pictures as seen under the microscope.

For instance, a section through the mid-cervical region shows the posterior median artery and its branches engorged with blood and surrounded in its adventitial lymph sheath by a cellular proliferation practically identical with that seen in the cases of acute poliomyelitis. In the white matter surrounding the vessel the most noticeable feature is the great proliferation going on in the neuroglial cells, which is much more active in the immediate proximity of the vesses and fades off more or less as the distance increases. All, or nearly all, the neuroglial cells are enormously swollen and many contain two or more nuclei which are also large and sometimes vesicular. Vacuoles are at times present in the cell plasma. Among these cells are seen the remains of the nerve fibres with swollen myelin sheaths and swollen axil cylinders, the latter often five or six times their normal diameter. Here and there are spaces from which the myelin and axis cylinders have fallen. In a section showing their condition in only moderate intensity in the posterior columns one may find the grey matter practically normal and most of the anterior horn cells in a state of good preservation. On the other hand, in sections where the involvement of the white columns is more general it is usual to find the cells of the anterior horn swollen and chromatolytic.

Another characteristic picture is that presented by a portion of the white matter in which two or three small vessels are seen in transverse section. These appear engorged with blood which, although probably in a condition of stasis, shows no definite evidence of coagulation. Around the vessels is a dense ring of mononuclear cells, a little further away a zone in which there appear to be many polymorphonuclear leucocytes, and everywhere in the neighbourhood numerous neuroglial cells of all shapes and sizes scattered amongst granular débris or swollen nerve fibres. In similar situations large hæmorrhages have taken place and the blood is dispersed between the fibres so as to form for the latter in places a kind of dark framework.

In the soft meninges covering the cord, and also in the anterior median fissure, is seen a cellular proliferation; the majority of the cells are of the mononuclear type but a few are polymorphonuclear, and other varieties, which are difficult to classify, are also present. The Nissl sections emphasise the fact that ganglion cells are only degenerated in proportion to the amount of inflammation present, but, unlike acute poliomyelitis, the anterior horns may be free from inflammatory exudations and yet the cells swollen and chromatolytic provided that there are marked inflammatory lesions in the surrounding white columns. Sections from the cervical and other regions stained by the Busch method show surprisingly little change, probably owing to the short duration of the morbid process, but a remarkable feature in these preparations is the presence of large droplets of fat in the meninges, the epispinal space, and undoubted evidence of degeneration of the fibres of the cord immediately subjacent to it. In this manner a narrow rim of scattered but large black dots can be seen just beneath the membrane. Numerous amyloid bodies are scattered about the periphery of the cord and along the rim of the great vessels. This case is typical of acute ascending myelitis, other examples of which may be found scattered through medical literature.

A very complete account of another fatal case was published by Dr. Thomas Buzzard and Dr. J. S. Risien Russell in the Transactions of the Clinical Society in 1898, the clinical features and morbid anatomy closely resembling those I have just referred to. Risien Russell succeeded in growing a diplococcus from the meninges after death which presented some characteristics similar to, but not identical with, those of the meningococcus and which proved pathogenic to guinea-pigs and mice. Rhein in 1904 recorded another example of the disease and his paper contains references to most of the preceding published cases. There has been sufficient bacteriological investigation to show that this morbid condition can be the result of infection by many different varieties of bacteria, and experimentally Marinesco has shown that an infective meningo-myelitis can be produced by several of the ordinary pyogenic organisms. Another point of interest to be gleaned from the literature is the evidence afforded for the belief that although this malady may arise in what appears to be a spontaneous manner in healthy subjects, it is not infrequently a secondary complication in cases of infective diseases of other organs. For instance, Sir Thomas Barlow described in 1887 the onset of symptoms of rapidly spreading paralysis in a man, aged 23 years, who was recovering from measles and who died in the course of 11 days. The cord showed changes which enable one to place the case in this group although the grey matter had suffered in a relatively greater degree than in some of the other instances. Oettinger and Marinesco, and Auch and Hobbs have recorded a similar sequela in cases of variola, and Lépine believes that there is a definite typhoid myelitis of the same infective character. It is very probable, too, that many cases of so-called "urinary paralysis" and the cases of acute ascending paralysis secondary to chronic cystitis described clinically by Walker should be placed in this category.

We may fairly assume, then, that acute ascending myelitis is an infective disease probably due to the presence of various bacteria in the tissue of the cord, and we have already seen that acute poliomyelitis is an infective process due to the influence of bacteria or their toxins. What is the essential difference in the pathogenesis of the two conditions which will explain the very different morbid anatomy, the different symptomatology, and the very different etiology in the way of age, epidemic, and seasonal incidence. I have in my second lecture laid before you my grounds for believing that acute poliomyelitis is the result of a poison, with neuroglial affinities, circulating in the blood stream. There is still stronger evidence, to my mind, in favour of the view that acute ascending myelitis is the result of a bacterial infection of the lymphatic system of the spinal cord. In saying this I do not wish to suggest

DESCRIPTIONS OF ILLUSTRATIONS ON PAGE 865

Fig. I.—Acute ascending myelitis. Transverse section from white matter of posterior columns in dorsal region. Vessels engorged and surrounded by round cells. Infiltration of the nerve substances by leucocytes and proliferating neuroglial cells.

Fig. II.—A large hæmorrhage in the white matter among the perve fibres.

Fig. III.—Perivascular infiltration around a vessel in the anterior horn in the dorsal region.

Fig. IV.—A vessel in the posterior median septum showing the cells in the adventitial sheath and the proliferation of neuroglial cells in the neighbouring white matter. Explained diagrammatically in Fig. 5.

Fig V.—*a*, White matter with neuroglial proliferation. *b*, Outer layer of adventitial sheath. *c*, So-called perivascular lymph space crowded with cells. *d*, Vessel wall (media). *e*, Lumen of vessel.

Fig VI.—Landry's paralysis. The most advanced type of cell change met with in the anterior horn in any of the three cases. The usual change is represented in Fig. 3 of Lecture I.

Fig. VII.—Anterior horn in Landry's paralysis showing fatty condition of ganglion cells and fine fatty change in the surrounding grey matter.

Fig. I.

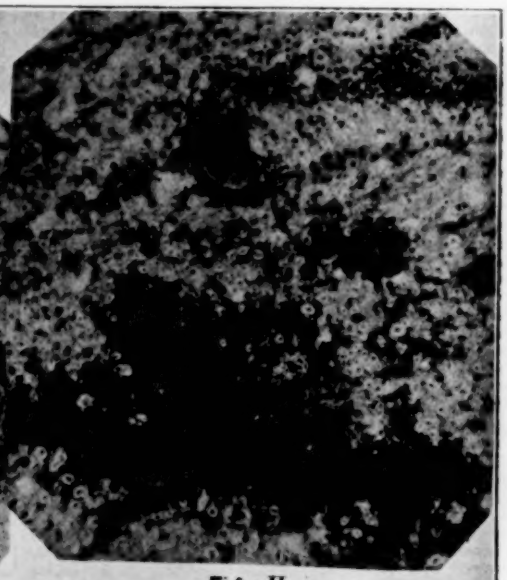

Fig. II.

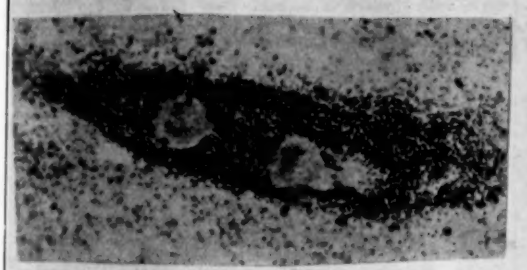

Fig. III

Fig. IV.

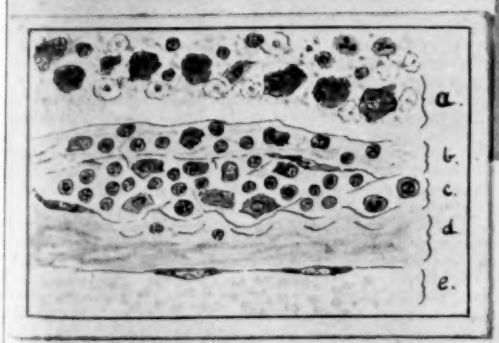

Fig. V.

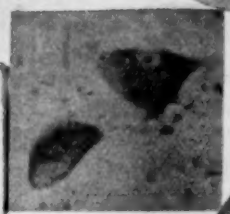

Fig. VI.

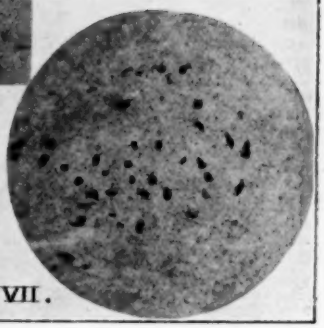

Fig. VII.

that this disease is a myelitis secondary to meningitis produced by the presence of organisms in the cerebro-spinal fluid. We frequently see cases of intense meningitis in which there is no evidence of myelitis beyond the general toxic effects of the poison on the ganglion cells and myelin sheaths. In acute ascending myelitis we have a condition closely resembling the morbid process produced experimentally by Homen when he injected organisms into the sciatic nerve or into the substance of the spinal cord. The characteristics common to both the human disease and the experimental results are the scattered irregularity of the lesions, the preference for the white matter, and especially for the posterior columns, the spread of the process in an upward direction along the central cord and meninges, in addition to the essential features of the inflammatory processes. The fact that in many cases of virulent meningitis in which the causative organism can be seen in great numbers in the meningeal exudate there is no invasion of the cord itself, suggests that the subarachnoid space is not in direct communication with the intramedullary lymphatic system, although both the meninges and the cord can be infected from the lymphatics of the spinal nerves and spinal roots. The anatomical basis for this pathological fact is not, as far as I know, clearly understood.

The theory of lymphatic infection explains why in acute ascending myelitis the perivascular infiltration is not a general one as it is in acute poliomyelitis, and why the foci of inflammation are localised in such a way as one would expect from the lodgment of micro-organisms here and there in the tissues. In other words, the incidence of the disease is independent of the blood-supply except in so far as the vessels penetrating the cord carry with them lymphatic channels. Some further support is offered in my case by the presence of the ring of fatty change in the pia mater, epispinal space, and cord periphery, indicating, as it does, that the earliest changes took place in this part of the lymphatic system and thence spread along the lymphatics of the radial vessels into the interior of the cord. Unfortunately this point of view was not in my mind when I examined the case anatomically. If it had been I should have studied especially the lymphatic tracts leading to the central nervous system—those which accompany the spinal nerves. On the other hand, I have had the opportunity of examining carefully a case of secondary infection of the spinal cord with sarcoma, the primary lesion being situated in the kidney.

This case suggested very forcibly the possibility of infection of the spinal cord from the organs of the abdomen and thorax and is confirmatory of the experimental work of Homen, in spite of the fact that a malignant neoplasm and not a bacterium was the infective agent. It is, on the other hand, conceivable that in some instances the infection of the cord may be, in the first place, through the blood stream and the spread of the morbid process within the cord carried on by the intramedullary and meningeal lymphatics.

The question of the diagnosis of this disease need not detain us long. Sufficiently careful clinical examination should prevent any confusion with acute poliomyelitis or Landry's paralysis on account of the presence of more or less complete sensory loss climbing up the segmental ladder of the body rung by rung, hand in hand with the paralytic phenomena, and on account of the early affection of the sphincters. In a similar way the root distribution of the anæsthesia and paralysis will suffice to distinguish acute ascending myelitis from acute toxic polyneuritis, in which disease the anæsthesia is rarely so complete and is usually confined to the stocking and glove areas. It is obvious that the prognosis in acute ascending myelitis must always be exceedingly grave and it is highly probable that the great majority of cases end fatally.

The conclusions arrived at in connexion with acute ascending myelitis are as follows:—

1. A group of cases, which have the same clinical picture, but which may arise either spontaneously or as a secondary complication in other infective conditions, deserves the name acute ascending myelitis.

2. These cases are characterised from the clinical point of view by an acute ascending paralysis associated with marked loss of cutaneous and deep sensibility of all kinds and with loss of sphincter control, and anatomically by an acute inflammation of the spinal cord, affecting both the white and grey matter, beginning generally in the lower dorsal or lumbar regions and spreading upwards to the medulla.

3. Both on experimental and clinico-pathological grounds there is evidence to support the view that the inflammation is due to an infection of the lymphatic system of the spinal cord; in other words the disease is a spinal lymphangitis.

4. The condition is not a specific one and may be due to the action of various micro-organisms. There is no particular age incidence nor is there any instance of an epidemic tendency.

LANDRY'S PARALYSIS.

The first question I have to put is this: Is there a distinct morbid condition deserving of the name Landry's paralysis? Probably Landry's paralysis is the best-abused name in medical literature and more cases have been described under that heading with no justification than under any other title. Every form of paralysis which has been rapid and which has happened to begin in the lower extremities and extend upwards has been called Landry's paralysis, whether the morbid changes in the cord have been gross or insignificant. Nearly as many fatal cases of acute poliomyelitis in the adult have been published under the name Landry's paralysis as under their proper title.

Much the same may be said of the efforts which have been made to force all cases of Landry's paralysis into the category of peripheral neuritis, but for this course there are much stronger grounds. It is quite evident that not every case of acute ascending paralysis should be called Landry's paralysis and therefore the important point to decide is whether there are sufficient other clinical and pathological data to form a special disease. To my mind it does not matter, nor shall we ever know, what was the actual disease from which the cases described by Landry suffered. It is sufficient that he called our attention to a class of case in which the symptoms were those of a rapidly spreading motor paralysis without atrophy and without sensory or sphincter disturbances and in which he was unable by the methods at his disposal to detect anatomical changes. Does this class of case exist now? The answer to this question is in the positive if we make allowance for our improved histological methods, and yet remember that Landry would certainly have been able to detect the changes of acute poliomyelitis or of any other acute inflammatory process. The advantages we have over Landry consist chiefly in being able to examine nerve cells by the Nissl and nerve fibres by the Marchi methods.

I have had the opportunity of examining clinically and anatomically three cases of acute motor paralysis presenting the symptom-complex described by Landry and in each case there were identical pathological findings, all of which were slight and only demonstrable by the methods I have just referred to. Three cases alone are almost sufficient, but there are many others in the literature which may be added for the purpose of establishing a distinct morbid entity. The first case was one which I published in full about four years ago, together with the results of a bacteriological investigation. Of the other two, one was observed before and one after the first, but neither has been previously published. A short account of the clinical history of each is necessary before passing on to their pathological features.

CASE 1.—The patient, a man, aged 33 years, was admitted into the National Hospital for the Paralysed and Epileptic on Dec. 20th, 1902, under the care of Sir William Gowers. The duration of his symptoms extended over 18 days.

CASE 2.—A youth, aged 18 years, was admitted under the care of Dr. James Taylor on March 3rd, 1902. The patient was an engineer's assistant and had never had a day's illness since he began work at 11 years of age. There was no history of alcohol, gonorrhœa, or syphilis. Three weeks before admission he noticed some pain in his back and a feeling of general weakness. Four or five days later he experienced definite paresis in his legs, falling down in attempting to ascend some steps. The trouble increased and in the course of a day or two he was obliged to take to bed. A week later his arms began to lose power, respiration became affected, and regurgitation of fluid through his nose took place on drinking. On admission the patient looked strong and healthy as he lay in bed and his mind was perfectly clear. The motor functions of the cranial nerves were in no case lost, but there was slight general weakness of the facial, mandibular, and palatal muscles. On the other hand, the tongue and eye movements were of normal strength and range. The neck muscles were distinctly paretic and the patient was unable to raise his head. All the arm movements were feeble, but none absent; he could not raise his arm or forearm against gravity, but could extend and flex his wrists and fingers against the same

force. Full extension of the terminal phalanges was impossible and the movements carried out by the thenar and interosseal muscles were extremely feeble. On the whole the proximal parts of the limb were affected more than the peripheral, but the condition was very generalised. The whole of the thoracic and abdominal musculature was morbidly paretic, respiration being partly costal, partly diaphragmatic, and much embarrassed. The respiratory rate was 28 per minute. The legs were still more paralysed; slight flexion and extension of toes were possible, but no movements at the ankles or knees. The patient could just shift the thighs but was unable to lift them. The electrical reactions were normal everywhere. On the sensory side no impairment of cutaneous sensibility could be detected, but the patient experienced some tingling and pricking in the hands, feet, and legs. There was some tenderness of the calves and arms on pressure. All deep and superficial reflexes were absent and examination of the internal viscera revealed no abnormality. The sphincters acted normally. Death took place within 48 hours of his admission from respiratory failure, the temperature never rising above normal until just before death, when it reached 99·4° F. The duration of the symptoms was about three weeks.

CASE 3.—A man, aged 41 years, was admitted into the National Hospital for the Paralysed and Epileptic on May 27th, 1903, under the care of Dr. J. S. Collier. The patient had enjoyed good health with the exception of an attack of rheumatic fever at 22 years and a doubtful history of syphilis. On May 22nd he noticed some tingling in his hands and feet. On the evening of the 23rd he was unable to lift a glass to his lips and the following morning he was conscious of weakness in all four extremities. On the day of admission he had become unable to stand or even to sit up and his arms were useless. He complained of some painful cramps in his paralysed limbs and some dull pain in the small of the back. He had no numbness and no sphincter trouble. On examination the patient proved to be a large, muscular, robust man, quite unable to help himself in any way. His temperature was 99° F., the pulse was 112, and the respirations were 28. There was complete flaccid palsy of both the upper and lower extremities and of the trunk muscles; raising the head from the pillow was just possible. Respiration was very difficult, both intercostals and diaphragm being extremely weak. Coughing was impossible, articulation was imperfect, and the voice was feeble. Although he had considerable difficulty in masticating his swallowing was fairly good. There were no other signs in the cranial nerves. Cutaneous sensibility was perfect everywhere and no tenderness was present in the muscles or on pressure over the spine. All deep and superficial reflexes, including the jaw-jerk, were absent. The electrical reactions were normal except that the response in the legs was perhaps rather slow. The sphincters were under normal control. The respiratory difficulty increased rapidly and the patient died at 6 o'clock the following morning, the temperature never rising above 100·4°. In this case the duration of the disease was only six days.

The results of the post-mortem examination of the three cases may be taken together as they closely resemble one another. The points of interest are the following.

1. No evidence of disease was present in the nervous system to the naked eye, except general vascular engorgement. It is particularly to be noted that the cord was firm in consistence throughout in all cases.

2. The only cell change was that seen in the spinal cord by the Nissl method, and in no instance was it extensive. The first case presented a considerable number of cells, both of the anterior horns and Clarke's column, with early pericentral chromatolysis and a few with complete, or nearly complete, loss of chromatin granules and excentration of nuclei, especially in the lumbar region. In both the other cases a similar condition was met with, but of even slighter degree in the third. With regard to this cell change I would remind you that I found nothing of the kind in the spinal cord of any of the general toxic cases which I mentioned in my first lecture.

3. By the Marchi method the nerve fibres in the cord and in the peripheral nerves showed the fine scattered droplets of fat to which I referred in my first lecture. I pointed out then that this form of myelin degeneration differed from true Wallerian toxic degeneration in the fact that the droplets were smaller and discontinuous, generally single or only two or three together, and was not necessarily associated with any loss of function on the part of the axis cylinders. Having found a similar appearance in all sorts of toxic conditions without paralysis I am not inclined to regard it in Landry's paralysis as indicative of anything more than the toxic state undoubtedly present. When I published the first case some years ago I attached more importance to this fatty change than I do at the present time. Fatty change was also demonstrated by the Marchi method in some of the leg muscles in two out of the three cases, and the cells of the spinal cord probably contained rather an excess of fat as seen by the same method.

4. There was no definite evidence of neuroglial or vessel changes. In the first case, in one part of the cervical region a very slight perivascular infiltration was seen around one of the branches of the central artery, but this was entirely exceptional. Examination of the neuroglial tissue in sections of the first case, stained by methyl violet, showed that many of the neuroglial nuclei were surrounded by rather more protoplasm than normal but there was nothing to suggest active proliferation of these elements. A certain number of amylaceous bodies was present in each instance.

If we subtract from the morbid changes I have described the diffuse fatty myelin degeneration in the white columns of the cord and in the peripheral nerves, which is common to acute toxic states of various kinds, we have left practically nothing but the ganglion-cell changes in the spiral cord. The latter are not of great degree or of extensive distribution but must be regarded as important on account of their absence in cases of "non-nervous" toxæmia. There is justification, then, if histological data are to count for anything, for believing that the poison at work in these cases exerted its chief influence on the ganglion cells and that the changes thus induced form the only obvious morbid anatomy of the disease. With this we must rest content, noting, by the way, that histological change does not indicate truthfully in this instance, as in many others, the depth of functional disturbance.

The cases that I have just described are not by any means the only instances in the literature in which the clinical symptoms of Landry's paralysis have been associated with slight cell changes and diffuse fatty myelin degeneration. Moreover, the cases which were examined before the days of the Nissl and Marchi methods and which presented no anatomical changes may well be allowed a place in the same category.

BACTERIOLOGY.

It is usual, in discussing the bacteriology of Landry's paralysis, to drag into the discussion all the cases of acute spinal paralysis in which bacteria have been detected in the spinal cord, the meninges, or the blood. I have done this myself in a previous paper, but now I shall confine myself to those examples of the disease which may properly be placed by the side of the three cases I have just described, cases in which there is nothing to suggest a bacterial invasion of the spinal tissues with inflammatory reaction. In the first place I will recapitulate briefly the results of my bacteriological investigation of Case 1. 1. A micrococcus was isolated in pure culture from the blood of the patient after death. 2. An organism, indistinguishable from that which was cultivated, was found in large numbers in the external part of the spinal theca. 3. A subdural injection of the cultivated coccus into a rabbit produced after some days a rapidly spreading palsy. 4. The same organism was discovered in the theca of the rabbit and isolated in pure culture from its blood. 5. In neither the patient nor the rabbit was the organism to be demonstrated in the spinal cord or the pia-arachnoid, and in neither case were there inflammatory reactions in those tissues. In my second and third cases all efforts to find bacteria, either by culture or by staining of films and sections, were without result.

The same lack of success has attended the bacteriological examination of most cases of Landry's paralysis which have not shown evidence of being in reality cases of inflammatory myelitis. Roger and Josué recorded a case of acute ascending paralysis without any known etiological factor in which they found toxic changes in the cells of the lumbar enlargement. Sections stained for bacteria did not demonstrate the presence of any organisms but cultivations from the heart blood produced a diplococcus resembling the pneumococcus. Injections of the coccus into a mouse did not prove fatal. A rabbit submitted to the same experiment died at the end of 21 days with symptoms of paraplegia and the

diplococcus was recovered from its blood. Macnamara and Bernstein isolated from the blood and cerebro-spinal fluid of a case of Landry's paralysis during life a micrococcus most frequently seen in tetrad groups, staining by Gram and growing anaerobically on gelatin without liquefaction. They considered that it bore some resemblance to the organism which I had found but were unable to obtain any positive results from experimental inoculation. The latter might be due, according to their statement, to the fact that only sub-cultures were used for injection in animals. This case made a complete recovery. These are, in my opinion, the only positive observations which are of value in regard to the bacteriology of the particular class of case under consideration. There is little to go on, at present, but it is clear that the blood should be investigated as well as the cerebro-spinal fluid during life, and that other tissues besides the central nervous system will need more careful search after death. The possibility of the extradural vascular tissues forming a hiding place is one to which I have already drawn attention, but my one and only opportunity for confirming this was unsuccessful.

With your permission I will leave the subject of Landry's paralysis at this point for the moment and reserve the discussion of its pathogenesis, diagnosis, and prognosis until I have said something about acute toxic polyneuritis.

ACUTE TOXIC POLYNEURITIS.

The subject of toxic polyneuritis is a very large one and I have no time or desire to deal with it as a whole. There are, however, cases belonging to this group in which the acute onset, the widespread palsy, and the lack of any marked anæsthesia produce a striking clinical resemblance to cases of Landry's paralysis, or even in some instances to acute poliomyelitis. It is with these cases I have now to do. The question of title again presents itself and there is a general feeling that this group might well have a distinctive name if only a suitable one could be found. "Toxic degeneration of the lower motor neuron" is too long, and "motor neuronitis" is open to popular if not medico-legal misinterpretation. It is perhaps better to postpone the classification of the various forms of toxic polyneuritis until we know more about the agents concerned in their causation. The only object I have in bringing these cases forward is to endeavour to settle the question as to their identity or non-identity with Landry's paralysis. The solution of the problem is, I believe, of great practical moment in that it involves the all-important question of prognosis in individual instances.

CASE 1.—A man, aged 25 years, was admitted into the Royal Free Hospital on August 8th, 1903, under the care of Dr. J. W. Carr. His previous health had been good, with the exception of a syphilitic infection three years before, for which he had been well treated. He had always been abstemious as regards alcohol and had been a total abstainer for four months. No other etiological factor could be discovered to account for his disease. About six weeks before admission he had suffered from some vague pains called rheumatic from which he recovered. On August 6th he did not feel well, was easily exhausted and faint, and experienced some tingling in his hands and feet and some pains in his toes while walking. In the course of the next few days he rapidly developed paresis in all four limbs and to a certain extent in his trunk muscles, although respiration was never embarrassed. On examination this paresis was found to be slightly more marked on his left than on his right side and to affect the peripheral more than the proximal parts of the extremities. There was also well-marked loss of power in the muscles supplied by both facial nerves so that he was unable to shut his eyes firmly or to whistle. There was practically no loss of cutaneous sensibility anywhere but the limb muscles were distinctly tender on pressure. The tendon reflexes were abolished and the plantar reflexes of the flexor type. The patient made a somewhat rapid recovery but not without some wasting of the muscles below the knees and elbows, which were slower in regaining power than those of the thighs and upper arms.

CASE 2.—A married woman, aged 34 years, was admitted into the National Hospital for the Paralysed and Epileptic on Jan. 15th, 1904, under the care of Dr. C. E. Beevor. Her previous history was good and as regards alcohol free from suspicion. A fortnight before her troubles began she had suffered from influenza. The onset of her illness was characterised by three days of pain in the back and legs, followed by sudden development of almost complete loss of power in the lower extremities. A week later her arms and face became similarly affected. On admission she was found to have facial diplegia of the peripheral type affecting both the orbicularis palpebrarum and oris, as well as the other muscles supplied by the seventh nerves. The function of the other cranial nerves was normal. All four extremities were markedly paretic, the peripheral muscles suffering more severely than the proximal. There was no sensory loss but both nerves and muscles were tender on pressure. All the deep reflexes were absent, the abdominal present, and the plantar of the flexor type. Slight but temporary difficulty in micturition was also noted. The patient made a fairly rapid and complete recovery.

CASE 3.—A man, aged 26 years, was admitted into the National Hospital for the Paralysed and Epileptic on March 9th, 1897, under the care of Dr. J. A. Ormerod. His circumstances were good, his previous health was satisfactory except for gonorrhœa two years before, and his habits were temperate. Eight weeks before admission the patient fell off his bicycle and cut his hand, the wound healing in a fortnight's time. Six weeks before admission he noticed numbness of both hands and a week later numbness of both feet. This was immediately followed by weakness of all four extremities. On examination his cranial nerves were tested and found to be normal. The movements of the head and neck were well performed. All the muscles of the arms were feeble but none of them completely paralysed. Respiration was carried on by the intercostal muscles, the diaphragm being entirely out of action. The abdominal muscles were moderately affected. There was great weakness of the legs, especially of ankle movements. The knee movements were affected more than those of the hips. Cutaneous sensibility was slightly diminished over the glove and stocking areas and the muscles of the limbs, especially of the forearms, were tender on pressure. None of the deep reflexes were obtained, the abdominal reflexes were brisk, and there was slight difficulty in emptying the bladder in the supine position. This patient made a rapid and good recovery but reappeared at the hospital six years later in a precisely similar condition which had again begun about six weeks before his admission. The paralysis had been ushered in with numbness in hands and feet and had attacked the peripheral more than the proximal limb muscles. Speaking generally, the patient was worse than during his first attack and suffered from slight impairment of phonation and deglutition but his restoration to health was both rapid and complete.

Such cases as these could easily be multiplied, but the three chosen will serve to illustrate the class with which I am dealing.

The opportunities for studying the morbid anatomy of this condition are not so numerous on account of its more favourable course, but there are instances in which a fatal termination has occurred and in which lesions limited to the lower motor or to the lower motor and sensory neurons have been found. Apart from cases complicated with a history of alcohol, the only post-mortem examination I have made bearing on this subject was that on a case already published by Stanley Barnes in his paper on Toxic Degeneration of the Lower Motor Neurone. In this patient, a woman, 34 years of age, the history recorded two attacks of peripheral neuritis. The first followed an attack of mumps, about 14 months before her death, and affected the lower extremities only. The second occurred two months later and involved all four extremities. The second attack left her with almost complete atrophic palsy of the feet and hands, the proximal muscles of the limbs recovering. About a year later she became suddenly ill and in the course of a few days developed fresh paresis which caused her death within 24 to 48 hours from respiratory failure. In this case I found, in addition to the evidence of the old lesion, acute toxic changes in the anterior horn cells of the cervical and lumbar enlargements, although no recent changes were present in the peripheral nerves, a fact which is not to be wondered at when it is remembered that the paralytic phenomena of the third attack had hardly lasted long enough for demonstrable changes by the Marchi method. There can be little doubt that this patient succumbed to the third attack of some toxæmic condition implicating the lower motor neurons. The same case illustrates the physical condition of a patient who has suffered from a severe attack of this disease by the presence of an almost complete atrophic palsy of the peripheral parts of the limbs.

Let me contrast this with a case which has been recently under the care of Dr. James Taylor at the National Hospital for the Paralysed and Epileptic. A man, aged 26 years, in the course of two or three weeks developed marked paresis of all the muscles of his limbs and trunk, beginning in the legs and spreading upwards. A similar paresis affected the facial muscles and those of deglutition. It was remarked that the movements at the hips and shoulders were as weak as those at the ankles and wrists; cutaneous sensibility was practically normal and there was no definite tenderness of any muscles on pressure. In the course of his recovery, which took place gradually and completely during the two months he was in hospital, the gain of power was steady and equal over the whole of the musculature and no local atrophy was present at any time. Dr. Taylor regards the case as one of mild Landry's paralysis—an opinion with which I am in complete accord.

While it is clear that, both in the cases which I have described under the heading of Landry's paralysis and in those to which I have referred as examples of toxic polyneuritis, the incidence of the toxic agent is chiefly upon the lower motor neurons, there is undoubted evidence from the clinical point of view that the two conditions are not identical. In both groups all the muscles of the bodies may be involved, but in Landry's paralysis it is the rule to find the paralysis evenly and generally distributed, in toxic polyneuritis to detect a more pronounced affection of the limbs and especially of their peripheral parts, and in some cases of the facial nerve. There are other points of diagnostic value to which I shall refer presently. In the meanwhile it will be of interest to consider whether there are any pathogenetic facts which will throw light on the difference between these two clinical pictures. Taking the case of the toxic polyneuritis first, it is only natural to suppose that the poison at work is carried by the blood and that the parts innervated by the grey matter of the cervical and lumbar enlargements suffer more than those in similar connexion with the dorsal region for reasons which I have already given in discussing the general principles of blood-supply. At the same time the whole of each lower motor neuron, including both the cell and its axon, is exposed to the poison in the general circulation and in these circumstances the particular affection of the long processes to the periphery of the limbs has an explanation offering some degree of probability. This applies to all forms of polyneuritis, whether the poison is of autogenous or exogenous origin, so long as it is carried by the blood.

Is it possible that the lower motor neurons are affected in a different way in cases of Landry's paralysis? Marinesco in his experimental inoculations of various forms of bacteria into the subarachnoid space of animals found that in some cases the organisms invaded the arachnoid space and the lymphatic spaces around the vessels *without* producing vascular or leucocytic reaction, at the same time secreting toxins which affected the elements of the spinal tissues. This fact is one of great importance because it would seem to show that certain bacteria or their toxins present in the lymphatic system of the cord can produce toxic effects without inflammatory reaction. In my first case of Landry's paralysis I found the cocci in the extradural tissues and it is quite conceivable that infection either by the cocci or by their toxins could take place from those tissues into the extramedullary and intramedullary lymphatics. From the absence of actual organisms in the spinal tissues in most of these cases it is probable that the toxins play the most important part in this infection. Allowing for a moment that this theoretical process can take place it must be granted that an explanation of the gradual, ascending, step by step, involvement of the central nervous system is provided, and one which makes the more progressive and even distribution of the palsies more readily understood. This theory does not necessarily pre-suppose that the blood is free from the responsible organism nor that the extradural tissue is its only resting place, but it suggests that there may be places where the bacteria may find suitable lodgment for the purposes of multiplication and whence they may pour their toxin into the spinal lymphatic system.

DIAGNOSIS.

I must now hasten to pass from what may well be considered the realms of theory to the more practical results of my own observation on the clinical characteristics which distinguish the various morbid conditions I have dealt with. In doing this I will leave acute ascending myelitis out of consideration for the reason that its sensory and sphincter disturbances are sufficient to distinguish it from any of the other three diseases. The two most important problems are the differentiation of acute poliomyelitis from Landry's paralysis and that of the latter condition from acute toxic polyneuritis. The mistake of calling a case of acute and widespread poliomyelitis one of Landry's paralysis has been made so often and by such good observers that I feel no shame in admitting that I have erred in the same way. The error, however, has led me to consider whether there are clinical features in the early stages of these diseases, at which time the only possibility of confusion arises, characteristic enough to prove efficient guides. The following points must not be taken as of universal and unexceptional application, but as general principles:—

1. *The constitutional symptoms* in the severe cases of acute poliomyelitis are more marked than those in Landry's paralysis, the range of temperature is higher, often reaching 102°–104°, the malaise and anorexia are more profound, and vomiting and disturbance of the alimentary canal are more frequent. In children convulsions are often associated with the former ailment.

2. *Sensory phenomena*.—In Landry's paralysis there may be, and often is, complaint of pain in the back, of sensations of numbness or tingling in the extremities before and during the onset of paralysis. The only sensation complained of in the paralysed limbs is that of discomfort or of cramps arising, partly at any rate, from their immobility; they may be handled without giving rise to anything more than slight tenderness on deep muscular pressure. In acute poliomyelitis the pains complained of are more urgent and affect not only the back, head, and neck, but frequently the limbs as well. The paræsthesiæ may be present but a prominent feature is the pain, sometimes very severe, elicited by passive movements of the affected extremities.

3. *Motor phenomena*.—In both diseases paralysis is flaccid and may be general. The escape of a single muscle or of a group of muscles in a region where all the others are affected or a marked asymmetry in the condition of corresponding muscles on the two sides of the body are suggestive of acute poliomyelitis rather than of Landry's paralysis. Within a few days or a week of the onset in cases of acute poliomyelitis, if death has not occurred it is usual to find rapid recovery in some parts and early atrophy and electrical changes in others. In Landry's paralysis recovery, if it takes place, is slow and evenly distributed without marked atrophy.

4. In both diseases *the sphincters* usually escape, the inability to empty the bladder and rectum, which is often a temporary symptom, being due to the impaired abdominal musculature and the position of the patient.

Similar general rules for diagnostic guidance can be drawn in the case of Landry's paralysis and acute toxic polyneuritis.

1. *Constitutional*.—Although the constitutional symptoms in Landry's paralysis may be only of slight severity it is the rule to find some rise of temperature and associated anorexia. Cases of acute toxic neuritis may, on the other hand, often run their course with no corresponding features.

2. *Sensory phenomena*.—I have already referred to those of Landry's paralysis. In acute toxic polyneuritis numbness, pins and needles, and sharp pains are common in the extremities and very marked tenderness of muscles, sometimes of nerves, is the rule. There may or may not be relative anæsthesia in the glove and stocking areas.

3. *Motor phenomena*.—These are very important and can only be properly appreciated by carefully and systematically testing the various groups of muscles in the body. In the first place the limbs are more affected than the trunk and the peripheral parts of the limbs more than the proximal in acute toxic polyneuritis. In the same disease, although many of the trunk muscles may be involved, the most marked incidence is generally upon the diaphragm, in which case respiration becomes entirely costal. Of the cranial nerves those supplying the facial nerves are often picked out and may be the only ones to suffer. Sometimes the palate is also affected. In Landry's paralysis the musculature is affected generally and evenly, the trunk and limbs presenting a degree of paresis which is more or less symmetrical and equal. In cases in which the paralysis first affects the lower extremities it is not uncommon to find these parts most paretic at the time of observation, but the spread of the disease will then be a progressive one in an upward direction and the thoracic muscles may succumb before the diaphragm or both may be

equally weak. When the muscles affected by the cranial nerves are involved deglutition, phonation, articulation, together with the movements of the face and jaws, may be impaired, but the fatal termination generally takes place before any one of these actions is abolished. The condition may be progressive over two, three, or more weeks, and yet be unassociated with any definite local atrophy of muscles, and recovery may take place without its appearance. In acute toxic polyneuritis recovery, even if rapid and good, is usually accompanied by some temporary muscular atrophy and diminished electrical excitability in some of the limb muscles, especially the dorsiflexors of the ankles and the extensors of the wrist and fingers.

4. *Reflexes.*—The deep reflexes are abolished in both diseases in the affected parts. The abdominal reflexes are often retained in acute toxic polyneuritis and nearly always abolished in Landry's paralysis. The plantar reflexes are absent or flexor in type in both instances and the sphincters are only temporarily, if at all, disturbed. In addition, it is interesting to note that relapses and recurrences occur in toxic polyneuritis, although they are, as far as I know, unrecorded in poliomyelitis or Landry's paralysis.

PROGNOSIS.

In acute poliomyelitis the prognosis depends upon the extent of the morbid process with especial relation to the respiratory musculature. In the case published by Greene, Wilson, and Rothrock artificial respiration was carried on for 41 days before sudden death brought a "merciful solution to a hopeless problem." If the patient survives the first few days without grave respiratory difficulty the prognosis may be regarded as favourable. The issue in cases of acute ascending myelitis I have already discussed and I need only emphasise here the gravity of the outlook. Landry's paralysis must also be regarded as a particularly fatal disease and in this respect presents a distinct contrast to acute toxic polyneuritis, in which a favourable termination may be generally anticipated.

In conclusion, may I venture to hope that I have provided some evidence that there are four distinct kinds of acute paralysis, that there are clinical and anatomical points by which they may be differentiated, and finally, but by no means conclusively, that acute poliomyelitis is an acute specific fever in which the nervous system is attacked through the circulation, acute ascending myelitis a spinal lymphangitis, Landry's paralysis possibly a species of spinal lymphatic intoxication, and acute toxic polyneuritis a toxæmia producing a parenchymatous degeneration of the lower motor neurons?

THE TREATMENT OF ACUTE FAILURE OF THE HEART.[1]

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IN selecting my subject I have been guided by the two following considerations: first, the importance of acute failure of the heart, which terminates life in such a vast number of diseases; and secondly, the fact that it is the medical man in general practice who is brought most intimately into relationship with this condition, and therefore fittingly qualified to discuss the subject and relate what his personal experience has been.

With regard to the manner in which acute heart failure is brought about two distinct classes of cases must be recognised. 1. The failure may be due to some organic condition affecting the heart, the blood, or the blood-vessels, and therefore initiated in a purely mechanical manner. 2. It may be the result of some nervous disturbance such as occurs in sudden death from vagus inhibition or in cases of tachycardia. The time-limits of this paper will allow me to deal with the first class only. It includes the vast majority of cases and is therefore of greater importance, more especially as the heart condition resulting from nervous disturbance does not so readily yield to treatment.

As a preliminary step I will first indicate the various pathological conditions with which we have to deal. The heart, as you know, has two functions: (1) that of a force pump, by means of which the blood is pumped during systole from the veins where the pressure is low into the arteries where the pressure is high; and (2) that of a suction pump, by means of which the ventricles are filled with blood during diastole. As a matter of fact, the heart has very little suction power at all, its cavities being filled chiefly because the pressure in the large veins is greater than that in the pericardium. Acute heart failure is therefore brought about by any condition interfering with the emptying of its cavities during systole or the filling of its cavities during diastole.

1. Interference with the heart in its capacity as a force pump may be brought about in two ways: either (*a*) by deficiency in its muscular power or (*b*) by an increased resistance to the output of blood. (*a*) Deficiency in the muscular power of the heart occurs in acute degeneration of its muscular fibres resulting from the action of a poison. Diphtheria, typhoid fever, pneumonia, rheumatism, influenza, and alcoholic poisoning are all examples of diseases leading to acute degeneration of the heart. There is evidence that alcohol may act as a direct depressant to the muscular tissue of the heart, without degeneration of the fibres having been previously produced. When the blood-supply of the heart is interfered with rapid failure may be brought about as illustrated by that resulting from coronary occlusion. Finally, acute failure may result in cases of chronic muscular degeneration, brought about in all the various ways with which you are quite familiar. Probably in a number of these cases implication of the auriculo-ventricular bundle is at the bottom of the mischief. (*b*) An increase of the normal resistance to the output of blood leads to an increase of work to be done. The heart may be diseased or healthy and therefore failure to respond to the increased amount of work presented to it may be brought about in some cases quite easily and in others only if the increased resistance is very excessive. Such an increase of work results from excessively high pressure either in the systemic or pulmonary blood-vessels. Acute Bright's disease is a good example of a disease producing a more or less rapid rise of arterial blood pressure and in this disease acute failure of the left heart may result. Everyone is familiar with acute failure of the right ventricle resulting from obstruction in the pulmonary circulation especially in mitral stenosis, bronchitis and emphysema, and pneumonia. It is also held by some observers, notably Professor Kronecker of Berne, that the diminished barometric pressure of high altitudes gives rise to acute heart failure, especially when some disease of the heart or arteries is already present, by engorging the lungs with blood and thus throwing a strain upon the right ventricle.

2. *The diastolic filling of the heart* may be affected in one of two directions, the diastolic blood quantum being either increased or diminished. Each of these conditions leads to a rapid failure of the muscular tissue of the ventricles. I will give two examples of excessive filling of the cardiac cavities. Muscular exertion empties the veins towards the heart and distends the right ventricle, this effect being exaggerated by the deep respiratory efforts. The vaso-dilatation and low arterial blood pressure of prolonged exertion also aids in keeping up the distension of the veins. The aortic blood pressure, on the contrary, is raised by a sudden effort and as you know may lead to rupture of an aortic valve with regurgitation of blood and resulting acute dilatation of the left ventricle. The diastolic blood quantum is diminished by any condition which raises the intra-thoracic pressure, the best example being pericardial effusion. A much more serious event is hæmorrhage into the pericardium, which rapidly leads to death by increasing the pressure in that cavity so that the heart is unable to fill. In this case the pericardium has not the time to stretch as it has in cases of pericardial effusion, so that in the latter disease death brought about in this way is comparatively rare. Finally, a diminution in the total amount of blood, as seen in hæmorrhage, and vaso-motor paralysis occurring in shock, both produce acute heart failure owing to the diminished filling of the cavities during diastole and also through muscular weakness resulting from deficient circulation in the coronary vessels.

Cardiac thrombosis and embolism probably bring about heart failure in several of the various ways which I have already mentioned. They may interfere with both the filling and the emptying of the heart and at the same time failure in the muscular power of the ventricles is generally present.

I shall commence with the treatment of deficiency in the

[1] A paper read before the North London Medical and Chirurgical Society on Jan. 17th, 1907.

muscular power of the heart resulting from acute disease. This class includes undoubtedly the largest number of cases which have to be treated, and in each disease the muscular weakness is brought about by the direct action of some poison on the muscular fibres, and probably in many cases the high fever is also responsible to some extent. We are, therefore, dealing with an acute degeneration of the heart. The old treatment consisted in stimulating the heart by means of alcohol, in the hope of keeping this organ in action until the disease had passed away. Acute degeneration of the muscular tissue was not then so well recognised as at the present day, and there is no doubt that many of those patients died from exhaustion of the heart as a result of over stimulation. Stimulation also increases the work of the heart, and this is precisely the state of affairs which we wish to avoid. At the present day we recognise three indications for the treatment of this condition: (1) to prevent, to stop, or to diminish the degenerative process; (2) to diminish the work of the degenerate heart; and (3) to stimulate the heart only over very short periods when fatal syncope is threatened.

There is only one acute disease in which we can successfully accomplish these ends, and that disease is diphtheria. Acute diphtheritic poisoning kills the patient from the direct action of the toxin giving rise to fatty degeneration of the heart; there is also acute degeneration of the nucleus of the vagus,[2] causing slowness and irregularity of the heart beat and a tendency to sudden syncope. This degenerative process can be arrested or prevented, if not already present, by the timely administration of antitoxin. The efficiency of action of the antitoxin depends upon the stage of the disease at which it is administered and upon the size of the dose. The importance of the antitoxic treatment of diphtheria is so very great that it cannot be reiterated too often. If antitoxin is administered on the first day of the disease, a circumstance only possible when the patient contracts the disease in a hospital, the mortality is only ½ per cent., and this mortality increases in exact proportion to the delay in the administration of antitoxin. After the fifth day antitoxin is unable to produce any reduction of the mortality because by that time advanced degeneration has already occurred and if it is sufficient in amount to kill the patient antitoxin is quite powerless. Therefore not an hour's delay must be allowed to occur before it is administered. If antitoxin is given to an animal already poisoned by diphtheria toxin large doses are necessary to save the animal. If given at the same time as the toxin comparatively small amounts are sufficient. Therefore the dose of antitoxin administered to a diphtheria patient must be very large and clinical experience substantiates this statement. In a mild case from 4000 to 6000 units must be at once given; in a severe case from 12,000 to 24,000 units, and if the membrane shows signs of spreading the dose should be repeated on the following day. Larger doses than this are probably of no use.

The second point—namely, to diminish the work of the heart—is of the utmost importance in diphtheria, and this is accomplished by rest, both physical and mental. Vomiting, jumping up suddenly in bed, mental excitement or shock, respiratory paralysis, getting up too early in the course of the disease, will all induce heart failure and may lead to sudden death. This effect of strain in bringing out a latent weakness of the heart may be seen at any stage of the disease. Strict confinement to bed in all cases is absolutely necessary. As the pulse varies from hour to hour it should be examined frequently to detect the first sign of irregularity. A slow, irregular pulse is a very fatal sign. When such irregularity is detected, especially if at the same time the heart shows the physical signs of dilatation, the greatest care should be exercised in the nursing of the patient. The head should be kept low and the patient on no account allowed to sit up. He should be disturbed as little as possible and the nurse instructed to be very careful in syringing or making applications to the throat, as the patient may struggle and become very exhausted during the treatment. Vomiting throws a strain upon the heart and therefore caution must be exercised in feeding the patient. If vomiting is present rectal feeding should be resorted to, as no drugs have any influence upon this symptom when once it is present. A consideration of the length of time a patient should be detained in bed is important. However mild the case appears to be, strict confinement to bed for three weeks is necessary, whether the pulse becomes irregular or not. The patient may then sit up for an hour or two during the day and at the end of a week will be able to walk about. If this exertion brings out a latent heart weakness the patient must be at once put back to bed. The signs of dilatation of the heart and irregularity of the pulse may last for eight weeks or more. Sudden death after the third month has not been observed; therefore, if the pulse is still irregular at this late period of the disease the patient may commence sitting up. Paralysis of the respiratory muscles throws a strain upon the heart by impeding the diastolic filling of that organ, by leading to obstruction of the pulmonary circulation, and by the collection of mucus in the air passages which cannot be expectorated. The heart muscle, already degenerate, is further affected by the chronic asphyxia induced. No direct treatment for this condition can be adopted but the useful expedient of raising the foot of the bed by blocks may be adopted. By this procedure the lungs are drained and the pharynx kept free from saliva, which causes asphyxial attacks by its entrance into the larynx. Belladonna may be given to diminish the secretion. The use of cardiac stimulants and tonics finds very little place in the treatment of acute fatty degeneration of the heart. It must also be remembered that the slow pulse indicates vagus irritation and therefore when this sign is present strychnine and digitalis are contra-indicated. Belladonna, which paralyses the terminations of the vagus in the heart, may be given and occasionally proves useful. Alcohol, which reflexly stimulates the heart, after absorption depresses the muscular tissue from the beginning and therefore is useless for prolonged stimulation in any form of cardiac degeneration. Its use is needed when an attack of sudden syncope occurs. Later in the disease, when the heart fails as the result of strain, the pulse is usually rapid. Strychnine and digitalis may now be given, because they slow the heart and, so to speak, put the brake on, thereby resting that organ. Digitalis in addition directly acts upon the muscle but strychnine does not. The application of heat and counter irritation to the præcordium is sometimes useful, especially when the patient is vomiting.

The acute cardiac degeneration occurring in typhoid fever is due to the direct action of some toxin upon the heart muscle and also to the prolonged fever. Unfortunately, we cannot prevent the degeneration by any antitoxin, as in the case of diphtheria, but we can act upon the fever. Cardiac degeneration, fortunately, is by no means so common in typhoid fever as in diphtheria. It usually shows itself clinically during the third or fourth week of the disease and is especially apt to supervene in those cases with very high fever. The pulse increases in rapidity and becomes very small and compressible and sometimes irregular. The first sound of the heart is short and the sounds are spaced. The impulse may also be displaced to the left. Systematic cold bathing, in addition to its beneficial effects on other systems, prevents heart failure in two ways. Firstly, it produces a lower range of temperature than would otherwise be present; and secondly, it acts as a tonic to the cardiovascular system as in health.

The limits of time prevent my entering into the details of the bath treatment. By this treatment the progressive increase in pulse frequency is not so often seen in typhoid fever; neither does it become so small and compressible. Systematic bathing renders less frequent the complications and modes of death dependent on circulatory failure and the mortality from these is considerably reduced. As in the case of the treatment of diphtheria by antitoxin, so in the treatment of typhoid fever by the cold bath, time is of the greatest importance. The treatment should be commenced at the earliest possible date.

In speaking of diphtheria we have seen the great importance of absolute rest, especially as the patients often feel quite well and resent the confinement to bed. The same applies to typhoid fever; however, in this condition rest is necessarily enforced because the heart failure occurs just at the very time when the patient is in his most helpless condition. Syncope is not so much to be feared as in diphtheria and does not occur during convalescence. Prolonged rest in bed after the temperature has dropped is therefore not so essential. Stimulants are usually not needed when the cold bath treatment is employed. They are, however, required if the case comes under observation late and heart failure has already appeared. In these cases it is dangerous to use very cold

[2] Bolton: The Pathological Changes in the Medulla Oblongata in Acute Diphtheritic Toxæmia (Archives of Neurology, L.C. Asylums, vol. ii., 1903).

baths. The temperature of the water should not be below 80° F. if the treatment is employed. If heart failure appears in spite of the bathing some stimulation is usually required. Alcohol continuously administered is unsafe owing to its depressing action on the heart muscle and its tendency to give rise to fatty degeneration. It is useful occasionally in an emergency, and also immediately before the administration of a bath. Hypodermics of strychnine are useful in heart failure in typhoid fever because this drug slows the heart and therefore gives it rest. It probably also prevents the tendency to collapse from vaso-motor dilatation. But, as Crile[3] has shown, it is of little use unless it causes twitchings and therefore its value is detracted from on this account. Quinine given early is in favour with many. When the pulse rate reaches 120 per minute three grains every three hours should be given day and night. After 24 hours if the pulse is not slowed the dose should be raised to five grains. The drug must be given early. Digitalis is objected to by some because it is said to produce very little effect when the temperature is raised, but in the apyrexial periods the pulse may suddenly fall in frequency. Personally I have not seen any ill effects result from the employment of digitalis in this disease. Ammonia, ether, camphor, and caffein all have their advocates, but personally I think they are not of much use.

In pneumonia the nerve centres are probably implicated as well as the heart muscle. The cardiac degeneration is brought about by the direct action of some poison, by the fever, and by the partial asphyxia to which the heart is subjected. The acceleration and increase in intensity of the respirations indicate an excitation of the respiratory centre. This is due to the partial asphyxia and probably also to the direct action of the toxic agent, since it occurs in the absence of pain and does not vary in proportion to changes in temperature. The same remarks may be made with regard to the acceleration of the pulse and high systolic blood pressure. Whether an increase in irritability of the heart muscle or an excitation of the cardio-accelerator centre over-riding that of the vagus centre is responsible for the circulatory changes is not certain. The signs of circulatory failure are increase in frequency and smallness of the pulse, some fall in blood pressure, cyanosis and pallor of the face, and coldness of the extremities. The first sound of the heart becomes short and feeble and probably also œdema of the lungs occurs. These symptoms may come on quite rapidly and death occur as early as the third or fourth day or some time after the first or second week. The left ventricle may be chiefly at fault or distension of the right ventricle may occur, with engorgement of the vessels of the neck. This condition of things, as I have before remarked, is referable to degeneration of the cardiac muscle and probably also to over stimulation. The obstruction to the flow of blood through the lungs also plays its part in increasing the work of the right ventricle. No specific serum, which is so valuable in diphtheria in preventing muscular degeneration, has so far been produced in the case of pneumonia. Certain sera have been manufactured but the results of this treatment are too indefinite at present to allow of any reliable deductions being drawn therefrom. Brem[4] in a recent paper recommends internal hydrotherapy with the object of passing a large amount of fluid through the blood so as to remove, if such a thing be possible, the toxic agent by the kidneys. He claims good results from the internal administration of large quantities of water. It is important to treat the fever and there is no doubt that, as in typhoid fever, the best means to employ for this purpose is external hydrotherapy—e.g., cold sponging or even the cold bath if the fever is high. An ice-bag applied to the affected side not only relieves pain but reduces the fever, and it is a method of treatment of which I can speak very highly. If there is much cyanosis and signs of circulatory failure tepid water or hot sponging should be employed. Delirium and sleeplessness, signs of excitation of the central nervous system, will induce heart failure. In mild cases the bromides or trional are the best drugs to use; when persistent sleeplessness and pain are present a hypodermic injection of one-quarter of a grain of morphine and one-third of a grain of atropine is indicated.

With regard to the use of cardiac stimulants the same remarks may be made as were used in the case of diphtheria, because in pneumonia the central nervous system is also affected. All cardiac stimulants acting upon the central nervous system such as strychnine are contra-indicated. Strychnine will further stimulate the respiratory centre and respiratory insufficiency may be induced. This objection does not apply to digitalis as it has practically no action upon the respiratory centre. The digitalis group of drugs acts chiefly upon the muscular tissue of the heart and is probably the best class of drugs to employ in circulatory failure in pneumonia. I object to the employment of digitalis in the early stage of diphtheria, because the pulse in this disease is so frequently very slow, but this objection does not hold in the case of pneumonia. Digitalis is regarded by some physicians as a specific for pneumonia. It is not of so much use when the right side of the heart is overloaded with blood, and for this condition the only efficient treatment is bleeding from the jugular vein. Opinions with regard to the administration of alcohol in pneumonia are divided. Some give it freely, others withhold it. Personally I administer alcohol only in cases of the alcoholic type of pneumonia. If used in other cases of pneumonia I think it should be given early when the central nervous system is excited and then it may do good by reducing cerebral excitement or it may be useful in a sudden syncopal attack as a reflex stimulant. Administration of oxygen temporarily relieves the asphyxia and causes a slight fall in the blood pressure. If used I think it should be allowed to play upon the patient's face and not be given through an inhaler.

Acute failure of the heart may result from alcoholic poisoning. Alcohol is a local irritant and therefore reflexly stimulates the heart, after absorption it is a depressant to the cardiac muscular tissue and leads to fatty degeneration. It allays irritability of the central nervous system and reduces delirium, and hence slows the pulse and respiration in acute diseases. It is stated that acute dilatation of the heart may come on after a drinking bout and independently of fatty degeneration. However this may be, dropsy resulting from acute heart failure is common in alcoholic subjects. It may be the left ventricle alone which is found dilated or the physical signs of enlargement of the right side also may be present. There is often no albumin in the urine, the pulse is usually quite regular, and after a few days' rest in bed, together with the administration of digitalis, the dropsy disappears. Sudden occlusion of a coronary artery always leads to death and does not admit of treatment. Acute failure of a heart which is the subject of chronic degeneration either leads to syncopal and anginal attacks or acute dropsy supervenes. In the former case the indications are to lower the blood pressure by nitroglycerine or any nitrite and reflexly to stimulate the heart by alcohol, ether, ammonia, and carminatives. When dropsy is present digitalis should be administered and other treatment for uncompensated heart disease employed. There is much more to be said in this connexion, but I must now pass on to consider those types of acute heart failure dependent upon an increase in the resistance to the output of blood. This increase of work may be presented either to the left ventricle, as is illustrated by acute Bright's disease, or to the right ventricle, as is seen in mitral stenosis or bronchitis and emphysema, in which diseases acute failure of the right ventricle is apt to occur. In acute scarlatinal nephritis hypertension in the systemic circuit is rapidly developed. The heart is healthy to begin with, but in from five to six weeks shows the physical signs of hypertrophy of the left ventricle. In the meantime failure of this side of the heart may occur leading to œdema of the lungs, cyanosis, and a rapid feeble pulse. The right side is also commonly dilated. The first indication for treatment is to lower the arterial tension and to relieve the heart. In order to do this nitroglycerine should be employed and may be usefully combined with venesection and saline purgation. At the same time I employ digitalis to stimulate the heart muscle. Digitalis should not be used for cases of this description unless combined with nitroglycerine, as one of its actions is to raise the blood pressure.

When acute dilatation of the right side of the heart occurs in mitral stenosis or emphysema and bronchitis the treatment is venesection, preferably from the jugular vein. I say the jugular vein because blood can be directly abstracted from the right side of the heart in this way; whereas, if the basilic vein be used, the blood is abstracted not from the right side of the heart directly but from the whole of the arterial system, and thus indirectly from the right ventricle. Digitalis with diffusible stimulants are not of any use till the patient has been bled.

I now pass to a consideration of acute failure of the heart

[3] Crile: An Experimental Research into the Pathology of Shock, 1897, and Blood Pressure in Surgery, 1903.
[4] Brem: Johns Hopkins Hospital Bulletin, vol. xvi., No. 175, p. 325.

resulting from an increase in the diastolic blood quantum. Here the heart muscle may be perfectly sound and the acute failure results directly from a flooding of the cavities with blood during diastole so that the ventricles become over-distended and are unable to empty. The best example of this condition is found in the effects of strain, including all forms of undue exertion. Sudden severe exertion results in a narrowing of the peripheral arterioles and a rise of systemic blood pressure. The blood pressure, however, soon falls from reflex dilatation of the arteries of the muscles, from increase of the circulation in the skin, and from the sweating produced. The muscular contractions empty the veins in the direction of the heart and the right ventricle is unduly dilated during diastole. The left ventricle secondarily dilates. In prolonged exertion, therefore, the stress is chiefly borne by the right ventricle. When the strain is very sudden the stress is chiefly borne by the left ventricle and an aortic valve may rupture leading to rapid acute dilatation of that cavity. It follows, of course, that the most dangerous results are seen in those who have not had any preliminary training. Functional disorder of the heart, irritable heart, or persistent rapidity for months may follow, but what concerns us now is the acute dilatation of the right ventricle. Cyanosis, dyspnœa, cold perspiration, præcordial pain and irregular small pulse ensue, and later mitral regurgitation, albuminuria, and œdema may appear. Autometabolic poisons are formed in violent exertion and may account for the profound insensibility or convulsions which are liable to occur. The first principle in the treatment of such a condition is to relieve the right side of the heart by venesection and the application of leeches. The heart must then be stimulated by counter-irritants and diffusible reflex stimulants such as alcohol, ether, or ammonia. Following this, if the patient recovers a few weeks' complete rest are absolutely necessary, with careful supervision. Later, quiet and interesting exercises such as golf may be indulged in. No alcohol or smoking should be allowed. If dropsy supervene with dilatation of both cavities of the heart digitalis is the drug to employ. When an aortic valve suddenly ruptures there is severe pain in the præcordium and faintness, with irregular pulse and possibly hæmoptysis. Drugs are not of much value here and the only good treatment consists in absolute rest and the administration of morphine. Later, if the patient survives, the pulse develops the characters of aortic regurgitation. Cardiac thrombosis leads to acute dilatation of the heart, the result being violent anginal pains, with cyanosis and all the other signs of acute failure. The best treatment in cases of this description is to inject morphine subcutaneously.

According to Professor Kronecker of Berne[5] the effect of the fall of barometric pressure occurring in mountainous districts is to bring about engorgement of the lungs and increased filling of the right side of the heart. This is said to occur in healthy people at 10,000 feet. It becomes very dangerous in people with impairment of the vascular system, either arterio-sclerosis or chronic heart disease. The symptoms of heart failure, moreover, may not be present until after the patient has returned to the lower level, when he quickly may develop the symptoms of acute cardiac dilatation with fulness in the head and vertigo. The symptoms are especially apt to supervene if the ascent has been rapid, as occurs in railway journeys. The first point in the treatment is to send the patient down to the lower level and let him have absolute rest for several days. The methods of relieving the heart employed by the medical men who have these cases to treat are venesection, followed by the application of counter-irritation with aperients and diaphoretics. As stimulants caffein and camphor are recommended but not digitalis. Insomnia, which is liable to be troublesome, is treated by wet packs and bromides. Morphine in doses of from one-fourth to one-third of a grain is also used. If the patient recovers he is to be kept perfectly quiet for several weeks or even months.

I will now take up the last group of cases of acute heart failure—namely, that resulting from a diminution in the diastolic blood quantum. The efficient contraction of the cardiac muscle depending upon the proper distension of its cavities during diastole and also upon the normal circulation of blood through the coronary vessels, any condition which interferes with the diastolic filling of the heart by reducing the blood quantum will bring about a rapid acute failure of the organ. This may be brought about in one of three ways: (1) by a diminution in the total amount of blood; (2) by vaso-motor paralysis which increases the total capacity of the vascular system; or (3) by an increase of pressure in the chest which mechanically prevents the diastolic filling of the heart. The first condition is typically illustrated by hæmorrhage. The indications for the treatment of this accident are (*a*) to stop the hæmorrhage, and (*b*) to replace the blood which has been lost by salt solution. The saline must be given intravenously but not unless the hæmorrhage can be certainly stopped. The preliminary syncope is to be treated by raising the foot of the bed so as to increase the diastolic filling of the heart. The legs may then be tightly bandaged or abdominal pressure applied so as to force blood along towards the heart. The patient must be placed in a cool room and physical, emotional, and mental rest completely secured. If the bleeding has been absolutely stopped an intravenous injection of saline solution is then to be given and some diffusible stimulant. If the bleeding has not been certainly stopped, styptics are to be given if there is any probability of their reaching the bleeding spot. Saline is not to be intravenously injected, but after time for clotting has been allowed to pass repeated small subcutaneous injections of saline solution, or saline solution by the rectum, may be administered. The thirst is best relieved by spoonfuls of cold acidulated water. Later, iron will be found a valuable heart tonic. The second condition—namely, vaso-motor paralysis—is seen in shock. Shock probably includes a wider field than simple vaso-motor paralysis, but the researches of Crile have shown that vaso-motor paralysis is a very important factor and this affords definite indications for treatment. According to Crile's[6] definitions collapse is an *immediate* depression which may lead to death and may be primarily due to one or more of the following factors: (1) to cardiac failure; (2) to respiratory failure, resulting from disease or injury of thorax or of the central or peripheral nervous mechanisms; (3) to hæmorrhage; or (4) to vaso-motor paralysis, as in peritonitis, chloroform poisoning, and so on.

Shock is a *later* depression which may lead to death and is due to impairment or breakdown of the vaso-motor mechanism. It may be added to by any of the factors causing collapse. The vessels have lost their power to accommodate for changes of position, they are toneless, and stimulation of a sensory nerve causes no vasomotor response, or a further fall of blood pressure may result. The blood is largely transferred to the venous side and collects chiefly in the splanchnic vessels.

In the treatment of this condition it must be remembered that prevention is better than cure, and a great deal can be done, as you are all quite well aware, especially in conducting operations, to avoid subsequent shock. The indications for the actual treatment of a case are (1) to restore the vascular tone or (2) to increase the volume of the blood. Strychnine might appear to be an ideal drug for the treatment of this condition, as it is a powerful vaso-motor stimulant; however, Crile has shown that it is practically useless, because the vaso-motor centre is not in a condition to respond and, moreover, strychnine will not produce a rise of blood pressure until the stage of twitching has been reached. It is also known that shock due to over-stimulation of the vaso-motor centre can be produced by strychnine. Better results may be expected to follow the administration of suprarenal extract, which acts on the peripheral vaso-motor mechanism. A single injection of adrenalin is useless, because the subsequent fall of blood pressure is too rapid. If very small amounts are administered at frequent intervals in conjunction with repeated saline infusion the best results are obtained. The saline infusion should not be administered in a single large dose, especially in post-operative shock, but in repeated small doses. The position of the patient is of great importance. The head should be placed low and the feet raised in order to aid the diastolic filling of the heart. The question of diminishing the capacity of the vascular system by external pressure is to be considered. Crile, as you know, has invented a pneumatic suit, by means of which he exerts pressure on the surface of the body; he claims good results from its employment. At any rate bandaging the legs and abdomen can be tried quite easily. Cardiac stimulants are of doubtful value, because the heart will usually respond if sufficiently supplied with blood. The external application of heat is, of course, usually necessary.

[5] Zangger: THE LANCET, June 29th, 1903, p. 1730.

[6] Crile: Loc. cit.

The last group of cases of acute heart failure with which I shall deal includes those in which there is an increase of pressure in the chest. The heart, as you are aware, has very little suction power and is filled with blood mainly because the pressure in the veins is higher than the pressure in the pericardial sac, in which the pressure is continually negative, this negative pressure being markedly increased during inspiration. An increase of pressure in the pericardium is therefore accompanied by deficient filling of the heart and hence the great danger of acute heart failure. Two conditions with which we have to deal are pericardial effusion and pericardial hæmorrhage. The pericardium readily stretches as the result of pericarditis and will hold a considerable quantity of fluid without its tension being raised to the dangerous limit; the fluid is, moreover, poured out comparatively slowly and hence time is allowed for the stretching of the pericardium. However, if a high pressure occurs the patient will certainly die from acute heart failure unless tapping is resorted to, the needle being introduced into the fourth or fifth left intercostal space near the left edge of the sternum. Pericardial hæmorrhage is much more dangerous because the blood is poured out at a high pressure and rapidly distends the pericardium, which has not time to stretch. The patient dies not from the loss of blood but from the rapid rise of intrapericardial pressure. Tapping is, of course, useless and the patient always dies unless operation is resorted to within about 14 hours. The results of operation are certainly encouraging, as 41 per cent. recover.[7] cases of injury to the heart, of course, being more favourable than rupture of that organ due to disease.

Practically speaking, rupture of the heart due to fatty degeneration, acute abscess, and so on, always leads to death. The same may be said of a ruptured aneurysm. If the wall of the ventricle or a coronary artery be ruptured as a result of injury the pericardium must be at once opened and the artery tied or the wall of the ventricle sutured. It is advisable to introduce interrupted sutures not involving the endocardium and placed close together. They should be tied during diastole.

Finally, pleural effusion is liable to be accompanied by acute heart failure, and in the days when Trousseau[8] advocated tapping sudden death was of frequent occurrence. In addition to causing a rise of intrathoracic pressure, pleural effusion obstructs the circulation through the lung and, displaces the heart. Whenever the dulness reaches up to the apex of the lung, whether symptoms of respiratory distress are present or not, the patient is in danger of acute heart failure. He may die suddenly from syncope or a slower heart failure may occur, resulting in intravascular thrombosis or œdema of the sound lung. The only treatment for this condition is tapping and the chief indication for tapping is the amount of the effusion.

Devonshire-street, W.

CEREBRO-SPINAL FEVER.

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THE somewhat sudden and alarming epidemics of cerebro-spinal fever in Glasgow, Belfast, and other large centres of the United Kingdom have served to direct special attention to this most extraordinary and obscure disease. Isolated or sporadic cases of typical cerebro-spinal fever are constantly occurring in the practice of any large hospital, and I have during the last ten years observed several cases which cropped up in a most mysterious manner, some of them recovering and others rapidly progressing to a fatal termination. Why it is that these sporadic cases should not become epidemic is difficult to understand, and it is still more difficult to understand how the disease is spread with such rapidity amongst the children of a populous centre. The general impression is that the special germ or micro-organism known as the meningococcus of Weichselbaum is conveyed through the air passages directly to the base of the brain. The resemblance in the symptoms of this disease to many other forms of meningitis renders it extremely difficult of classification and the definition given by the late Mr. Radcliffe is, in my opinion, the most accurate. He describes cerebro-spinal fever as "an acute, epidemic disease, characterised by profound disturbance of the central nervous system, indicated at the onset chiefly by shivering, intense headache or vertigo, or both, and persistent vomiting; subsequently by delirium, often violent, alternating with somnolence or a state of apathy or stupor; an acutely painful condition with spasm—sometimes tetanoid—of certain groups of muscles, especially the posterior muscles of the neck, occasioning retraction of the head; and an increased sensitiveness of the surface of the body. Throughout the disease there is marked depression of the vital powers, not unfrequently collapse; and in its course an eruption of vesicles, petechial, or purpuric spots, or mottling of the skin is apt to occur. If the disease tend to recovery, the symptoms gradually subside without any critical phenomena and convalescence is protracted; if to a fatal termination, death is almost invariably preceded by coma. After death the enveloping membranes of the brain and spinal cord are found in a morbid state, of which the most notable signs are engorgement of the blood vessels, usually excessive, and an effusion of sero-purulent matter into the meshes of the pia mater and beneath the arachnoid. To the clinical manifestations of the disease indicated in this definition may be added the presence of Kernig's sign and of tache cérébrale."

From my own personal experience of a great many forms of inflammatory disease involving the brain and spinal cord I would say that the presence in the exudate of the meningococcus of Weichselbaum removed by lumbar puncture is the only absolute indication that we are dealing with true cerebro-spinal meningitis. If this particular organism is discovered and corresponds to the well-defined tests, then we are dealing with a case of epidemic cerebro-spinal meningitis. In a few instances it is impossible to discover the particular organism, but that alone will not negative the true nature of the disease. The full and excellent report of Dr. Gordon made to the Local Government Board is well worthy of careful study, hence it is not necessary to refer to the special characteristics of the micro-organism. The two cases which I record are of profound interest in demonstrating the difficulty, I might say impossibility, of differentiating between this disease and another form of meningitis with similar symptoms during life.

CASE 1.—The patient, a boy, aged ten years, was admitted into Mill-road Infirmary on Feb. 1st, 1907. His mother stated that he had been quite well until a week previous to admission (Jan. 24th), when he came home from school complaining of pain in the head—across the forehead and at the back of the head. He had also complained of pain in the abdomen and had vomited once on the morning before admission. The child had been very quiet and drowsy but irritable and not caring to be touched at all. On the night of Jan. 31st he had screamed out at intervals and had been restless and delirious. The mother said that the child had stated on Jan. 21st that he had been hurt by a football hitting him in the abdomen. He had complained of pain since then and had a slight cough. The bowels were regular.

On admission the patient was unconscious, delirious, and very irritable. The temperature was 103° F., the pulse was 110, and the respirations were 40. When left alone he was quiet but he breathed noisily. When being examined he struggled and was resistive. He did not understand questions and made no attempt to speak. He was not emaciated but there were several petechial spots about the skin. The patient assumed a lateral decubitus. Both knee-jerks were present and were somewhat exaggerated. Kernig's sign was not marked. There was no retraction of the head but there was some stiffness on passive movement. The pupils were dilated equally and there was no squint or nystagmus. There was a discharge from the ear on the right side. The abdomen was not distended, was soft, and moved with respiration. The tongue was dirty and dry and the bowels were constipated. The cardiac rhythm was rapid and regular in time and force. Râles and rhonchi were audible all over the upper and lower lobes of the left lung. There was no loss of percussion resonance. Over the right lower lobe there was loss of resonance. The breathing was bronchial and there were fine crepitation and bronchophony, which were also audible over the back of the right upper lobe. One and a quarter grains of sulphate of quinine were given every four hours and a drachm of brandy at like intervals. A "pneumonia jacket" was applied and seven and a half

[7] Hill: THE LANCET, Feb. 16th, 1901, p. 491.
[8] Trousseau: Lectures on Clinical Medicine, vol. iii., p. 221 (New Sydenham Society).

grains of bromide of potassium were directed to be given if required. On the 2nd there was dried purulent discharge in both pinnæ. There was dulness of the percussion note and fine and medium râles were heard down the whole of the right side of the chest. A dose of three grains of calomel was given, an ice-bag was applied to the head, and an enema was directed to be administered if required. The patient had a rigor at 7 P.M. and the temperature rose to 104·4°. The pulse was intermittent and the child was unconscious. He was delirious at times and he often cried out. Lumbar puncture was performed at 4.30 P.M. The fluid was clear, serous, and colourless. Cultures were made and the fluid was centrifugalised. Under the microscope the deposit was found to contain diplococci of Weichselbaum. On the 3rd the patient was still drowsy and semi-conscious but was not shouting out so frequently and was not so restless. Lumbar puncture was again performed at 12.45 P.M. and the fluid was still found to be clear and colourless. On the 4th the child did not appear to be so comatose as before, was not so restless, and appeared to be able to hear questions. Kernig's sign was marked. There was no distension of the abdomen. There was still some dried pus on the right pinna. The ear was syringed with boric acid lotion, after which a solution of one ounce of perchloride of mercury and three drachms of rectified spirit of wine was dropped in morning and evening. Three grains of calomel were given. On the 5th the patient was deeply comatose. The temperature was 106·4°, the pulse was 160, and the respirations were 56. The pulse was very thready and soft, there were no knee-jerks, and all the limbs were flaccid. The head was still rigid. There was some divergent strabismus. The chest still had râles and rhonchi but these were clearing from the front and were audible in the axillæ and the back. The patient was perspiring freely. A tepid sponging brought the temperature down to 101°. An enema was administered. On the 6th the temperature, which on the previous evening had been 100·2°, rose at 2 A.M. to 105°. The patient was rather irritable and tried to rub his eyes and ears. The abdomen was slightly retracted still but was soft. The pulse was very rapid and feeble. Coffee was given. At 4.30 P.M. the patient was much worse, the pulse being very rapid and more feeble (120 per minute). There were marked subsultus tendinum and flocculation with occasional cough. The respirations were 60 and the temperature was 105·4°. A drachm of glycerine as an enema was administered with good result and tepid sponging was ordered when the temperature rose above 103 6°. On the 7th the patient was still unconscious and the pulse was very feeble and rapid. The temperature was 104·4° at 10 A.M. At 1 P.M. a tepid sponging brought the temperature down to 101° and the patient's condition was much improved. Lumbar puncture was performed. The fluid was still clear and was not running so freely as before. A petechial rash was marked on the legs and the body. There was optic neuritis in both eyes. Mistura digitalis cum strychninæ (two drachms every four hours) was ordered. At 8 P.M. the patient appeared to be much more comfortable and seemed to understand questions and to take notice of affairs. There were slight sweating and increased diuresis. The colour had improved. On the 8th the improvement was not maintained. The pulse was very rapid and feeble and the temperature kept high. The bowels were still constipated. The glycerine enema was repeated. On the 9th the patient remained in the same condition as on the previous day. There were loud creaking râles and rhonchi audible over the entire chest, back and front. Bronchial breathing was present over the right lower lobe only and nowhere else. A tepid sponging was applied twice during the night with good effect. The pulse was very feeble and rapid (140 per minute) and the respirations were 44 per minute. There was a small septic blister over the sacrum. Dry gauze and xeroform powder were used. There was slight purulent, very offensive, discharge from both ears. A soap-and-water enema was administered and two drachms of glycerine per rectum were ordered to be repeated if required. The ear drops and the syringing were continued. On the 11th the patient became comatose and died.

A post-mortem examination was made 12 hours after death. No gross macroscopic lesions were seen on the brain or on the spinal cord. The lungs were in a state of broncho-pneumonia. There were several old calcareous glands and enlarged glands in the omentum. There was no ulceration of the intestine. The kidneys, the spleen, the heart, and the liver were healthy. Post-mortem appearances were, in fact, almost negative.

CASE 2.—The patient, a child, aged eight years, was admitted to Mill-road Infirmary on Feb. 13th, 1907. His mother stated that on Feb. 10th the child had complained of severe pain in the head and had vomited. On the 12th he had become very drowsy and had not been roused since. He had taken but little nourishment. The bowels had been opened on the 11th after an aperient but not since.

On admission the temperature was found to be 100° F., the pulse was 104, and the respirations were 26. The patient was lying on his back in a comatose state, the limbs being all flexed and rigid but they could be straightened by continued pressure. There was no rigidity of the neck nor was there retraction. The pupils were equal. There was no paralysis of the eye muscles. The lungs were clear and the abdomen was flat. There was no discharge from the ears. Two grains of calomel and an ounce of white mixture were given in the morning and half an ounce of diaphoretic mixture was ordered to be given every four hours. On the morning of the 14th there were rigidity and retraction of the neck. The patient ground his teeth, the limbs were all flexed and rigid, the knee-jerks were very sluggish, and tache cérébrale was well marked. The child uttered no cry. The tongue was furred but moist and there were sordes on the lips. Urine and fæces were passed involuntarily and the patient took no notice of anything. He was not irritable when touched. There were no petechial spots. At 3.15 P.M. lumbar puncture was performed when about 30 cubic centimetres of slightly opalescent fluid ran out. At 11 P.M. the patient was perspiring. The neck was very rigid but not very retracted. The patient was not so listless. There were variable squints (slight). Ten cubic centimetres of cerebro-spinal fluid were centrifugalised. It was slightly opalescent. There was a fair amount of whitish yellow deposit but no red deposit. Microscopical examination showed a large excess of leucocytes, multinuclear and lymphocytes, a very few red blood corpuscles, and no organisms. On the 15th the patient still perspired profusely. Miliaria appeared all over the upper chest. The neck was rigid and the child could not put his chin on his chest. The arms were folded across the chest and were rather rigid. The legs were straight now but Kernig's sign was present. The knee-jerks were slight and there was slight Babinski's sign. There was incontinence of urine and fæces and the patient would not respond to speech. The pupils were dilated but they reacted to light. There was paresis of the external rectus of the left eye. The patient was taking nourishment fairly well. The bowels were rather relaxed; the abdomen was flat. There was no vomiting. There had been no shouting out since admission. Sulphate of quinine mixture, one drachm, was given every four hours. The patient spoke a little when spoken to. He said "What" and "Well." On the 16th he would not speak. The tongue was moist but furred. Kernig's sign was present. There were no spots but some subcuticular mottling was observable on the thighs. The squint was still present. There were some large moist râles to be heard at the left base and some rhonchi at the front chest. At 5.30 P.M. lumbar puncture was performed and about 20 cubic centimetres of fluid ran out, at first in a stream, not drops. Ten cubic centimetres of the fluid were centrifugalised. Numerous lymphocytes and multinuclears were in the field but no organisms were present. At 9 P.M. the patient recognised his father and talked in a delirious way. On the morning of the 17th he again talked a little but was delirious. The head was still very rigid and the arms were folded on the chest. The legs were straight but Kernig's sign was present. The patient did not shout out at all, but he was restless. He had not passed urine for 12 hours. The tongue was moist but was covered with dirty white fur. A quarter of a grain of calomel was given every two hours. On the 18th two drachms of brandy were ordered to be given every three hours. There was slight ptosis on the right side and the right pupil was larger than the left one. There was no vomiting. The patient had uttered no cry since admission. He had tremor of the limbs (upper) again on this day. There was a profuse crop of miliaria on the chest. At 8 P.M. lumbar puncture was performed when about 15 cubic centimetres of fluid were withdrawn; at first it ran out, not in drops; it was slightly turbid. Microscopical examination showed an excess of cells as before, but no organisms. On the 19th the patient was rather worse. He was restless and he uttered sighing noises. The head was not retracted, but the neck was rigid. The back also was rigid. At 10 P.M. as the patient

had not passed urine since 1 A.M., a soft rubber catheter was passed. The urine was acid and clear and its specific gravity was 1010. At midnight on the 20th a catheter was passed. On the 21st the patient was in a dying state. There were no fresh focal symptoms.

A post-mortem examination was made 16 hours after death. Pus was found in the interpeduncular space and over the upper surface of the cerebellum in the middle line. The vertex of the brain was normal. Miliary tubercles (early) were discovered in both lungs and in the spleen and liver. There was a caseating patch in the spleen of about the size of the head of a bonnet-pin, as well as some caseating material about the glands round the head of the pancreas. The mesenteric glands were normal. The bronchial glands were not noticeable. On Feb. 25th some smears from the caseating patch in the spleen and the caseous glands about the head of the pancreas showed numerous tubercle bacilli.

The above two cases show the impossibility of making an accurate diagnosis between cerebro-spinal and acute tuberculous meningitis, especially in time of epidemic when attention is turned in that direction. The absence of tubercle bacilli from the lumbar puncture exudate is, of course, no reason for negativing tubercle, as they are only recovered in a small percentage from such exudations. The rapid onset of the tuberculous case is unusual, whilst in both cases there were skin rashes of a petechial character. I felt quite certain that I had to deal with a case of genuine cerebro-spinal meningitis and it was only at the post-mortem examination that that opinion was reversed. Had there not been the presence of an epidemic we would probably have looked upon the case as one of acute tuberculous meningitis. The withdrawal of quantities of cerebro-spinal fluid by lumbar puncture was followed in every instance by marked amelioration of the symptoms and even rapid improvement for a time, due evidently to the relief of pressure, but so soon as the fluid re-accumulated the symptoms seemed to arise with even greater severity than before. As a therapeutic measure, however, I would strongly urge repeated lumbar puncture and injections of lysol or some of the silver salts, or even permanent drainage of the spinal canal. No other treatment with which I am acquainted seemed to have the slightest curative effect on the disease, although the symptoms, of course, were immensely relieved. I have had no experience of the special meningococcic serum, but it is well worthy of trial. In fact, everything possible ought to be tried in such a malignant and fatal disease.

For the careful and accurate observations on these cases I am indebted to my colleagues, Dr. Arthur Hendry and Dr. R. G. Wills, resident medical officers in the hospital.

Liverpool.

A SERIES OF CASES OF PUERPERAL SEPTICÆMIA;

WITH COMMENTS.

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DURING the year 1906 there have been discharged from Monsall Hospital 49 completed cases of puerperal fever and it has occurred to me that some particulars of their condition may be interesting to others besides myself if only for the reason that clinical observations of this class of disease have not hitherto been reported with any degree of frequency in this country. Moreover, as the cases have all been treated by the same medical and nursing staff it is perhaps rather more possible than usual to compare them with each other.

I would call attention, in the first place, to the annexed table, in which the details of each case are briefly set forth. It is not pretended that this is in any sense complete, but it is, I think, useful inasmuch as it shows the type of case that is admitted to the isolation hospital of a large city. These details I propose to analyse and to comment upon briefly.

The results.—There is a gross mortality of 12 cases, or 24 per cent. Of these, four were obviously moribund on admission, and, in fact, died within a few hours of their arrival. It is, I think, greatly to be regretted that isolation hospitals are treated so badly in this respect by the general practitioner. When it must be obvious that the patient has but a few hours to live it can serve no good purpose, as far as his illness is concerned, to have him removed to hospital—usually it accelerates his end. It is often convenient, no doubt, that a death shall not occur in the particular house, or in the practice of the certifying medical man, but, on the other hand, the procedure adopted at the hospital, be it medical or surgical, is often debited with the patient's death, and the progress of science and the good that the hospital can do in other cases are thereby considerably hindered. In this series if the moribund cases could be deducted the death-rate would be reduced to 16 per cent. Of the remaining eight, one died from an attack of pneumonia which began six weeks after admission, when the patient was apparently convalescent, and had no apparent connexion with the original illness.

Another point is that in only two instances was the patient not obviously in danger of her life when admitted. This series does not, therefore, include those mild cases of septic intoxication, which yield to gentle local treatment, or, it may be, to purgatives alone, which may occur in private practice or in the clinique of the maternity hospitals. If these are included, the statistical fatality of any series may be very low indeed. Such cases have, as a matter of fact, never been sent to Monsall Hospital at all.

That the cases have, as a rule, not been admitted until the treatment adopted has been obviously useless, is shown by the fact that the average interval elapsing between the calling in of the medical man by the midwife, or (in the cases where he has been in attendance all along) from the onset of the signs of sepsis to the notification of the case was a period of four and a half days. In others words, what must be admitted to be the most important period in the disease from the therapeutical point of view has been spent in the application of ineffective—often futile—measures. As a matter of fact, this series, as far as it goes, is not a bad record of the uselessness of such measures as vaginal and intra-uterine douches with a little quinine internally in cases of severe septic infection.

With regard to those discharged as cured it is necessary to observe that the patients have not been sent home until they have had sufficient rest in hospital to enable them to perform ordinary house work without pelvic pain or inconvenience, and have resumed their normal weight. In the great majority the uterus had recovered its mobility. As will be seen from the record their stay in hospital has on this account been frequently prolonged, the average detention of all cases being 40 days, and of those that recovered 60 days. The only exception to this is case No. 29, where the patient was discharged to the workhouse infirmary in a somewhat weak state owing to the pressure on our accommodation that existed at the time. As far as possible lacerations of the vagina and perineum and adhesions in the pelvis have been treated before the patient left hospital.

The cause of the illness.—In every case a detailed account of the circumstances that preceded the removal of the patient has been furnished me by the courtesy of the medical officer of health (Dr. J. Niven) and the medical officer to the midwives supervising committee (Dr. M. Merry Smith), to whom I am much indebted. It is possible, therefore, to divide the cases into those attended at the confinement by a medical man and those where a midwife only was present. There were some cases also where the woman was confined in solitude or attended by a neighbour only. The "practitioners'" cases are 28 in number, the "midwives'" are 16. It does not, however, follow that the medical man was responsible for the infection of the patient in all cases where he was present at the confinement, for in many a midwife or trained nurse was there also and may well have made internal examinations, and it is, moreover, probable in some instances that infection took place during the puerperium from contact with dirty clothes or the unskilful administration of vaginal injections. Evidence of the responsibility of the medical attendant is seen more clearly when an inquiry is made into the degree of interference that took place at the confinement. In 11 of these 28 cases there is a history of the use of forceps combined with a variety of laceration of the parts (seen on admission) that could not have resulted from natural causes only. There were other instances also in which the hand had been introduced into the uterus for the removal of the placenta in which infection by this means is at least probable, but it is not possible to put this statistically.

The length of the incubation period gives some clue to the

nature of the infection. It is highly improbable, judging from the analogy of other cases of wound infection, that the true incubation period is over 24 hours in length. If, therefore, the initial rigor, or the first rise of temperature, occurs at a longer period than this after confinement the assumption is that the patient was not infected at that time, but subsequently during the puerperium. In the "practitioners'" cases the average day of onset was the third and in the "midwives'" series between the fourth and fifth. It would then appear that the midwife has not usually infected the patient by her actions at the time of the confinement. In subsequent infection the main factor, I believe, is the administration of vaginal douches which were given in almost every instance in this series. Possibly the neglect adequately to protect the external genitalia after confinement must also be considered.

Apart from these cases only, I may say that my experience leads me to believe that the routine use of the vaginal douche is the predominating factor in a large number of cases of puerperal fever. The injections are given with a Higginson's syringe almost invariably, and even if this is not used for enemata also—and I may add here that by no method of supervision whatever is it possible to insure that it shall not be so employed—infection of the interior of the instrument takes place whenever a vaginal douche is given, and the syringe can only be disinfected by prolonged boiling, which very few of the inexpensive instruments on the market will stand without becoming useless.

I may here express my own opinion that the carrying of a Higginson's syringe by midwives should be made illegal by supervising authorities. It is quite easy to give an enema by means of the douche can, and even if the same nozzle were to be used for rectal and vaginal injections by a careless or unscrupulous midwife, only the exterior and not the interior also of the instrument would be thereby infected.

The bacteriology.—In every instance swabs were taken with due precautions from the interior of the uterus and cultures were made therefrom in the hospital laboratory. The results are as follows. Streptococci were present in 29 cases. Of these, bacillus coli communis was present also in five cases; bacillus coli communis was present alone in one case; gonococci were present alone in two cases; staphylococci were present alone in one case; and a bacillus, as yet not identified, was present alone in one case. In 15 instances there was either no growth on the tubes or some suspicion of contamination of the swab. In 27 cases samples of blood taken from the basilic vein were examined also. Out of these no growth was obtained in 19 cases, whilst streptococci were present in eight. No other organisms were found in any of the blood specimens, though a full examination was made in each case.

For the identification of the various organisms the usual bacteriological methods were employed. I do not propose to enlarge on the bacteriology of puerperal septicæmia at present, but I should mention that the proportion of cases in which streptococci were found is greater in the 1906 cases than in those of the previous year. This is, I believe, to be explained by the fact that in 1905 there was a much larger proportion of "midwives'" as distinct from "practitioners'" cases. In the former late infection is the rule, and bacillus coli is present more frequently.

The nature of the lesion.—As I have stated, there was, in almost every case, evidence of intense toxæmia on admission, but the source of this was not always easy to determine. It is, however, possible to classify the cases somewhat roughly according to the nature of the lesion and we have accordingly the following. 1. *Cases of retained placenta or membranes.*—Of these there were 18, but it is important to note that in all except four the condition had passed from that of sapræmia only to septicæmia when the patient was first seen. In these the recovery was slow and often interrupted by pelvic inflammation or abscess, whereas in the purely sapræmic cases a marked and sustained improvement followed the removal of the retained products. This series also shows the futility of treating puerperal fever by intrauterine douching only, without examination of the interior of the uterus, for in almost every instance the interior of that cavity had been douched by a medical man previously. There was one death only in this series. 2. *Injuries.*—These were apparently the cause of the toxæmia in seven cases and in all the lacerations had been produced by the use of instruments. In one case there was a tear extending through the vaginal vault and the side of the cervix through the broad ligament into the peritoneal cavity which had been caused by the use of Hegar's dilators without preliminary anæsthesia or steadying of the cervix. In another, an almost precisely similar lesion followed manual extraction of the placenta. In the remaining five cases the premature application of forceps was responsible for the injury. Fortunately all these recovered, though general peritonitis supervened in one instance. 3. *General peritonitis.*—Eight cases, with four deaths. In all of this series the abdominal cavity contained free pus to an amount of at least one pint. All were treated by laparotomy and drainage with flushing in one case. When it is noted that the supervention of general peritonitis in puerperal cases is almost always regarded as an indication that death is imminent and unavoidable it is evident that this series, as far as it goes, is an indication that it is not always wise to refuse operation in moribund cases. 4. *Pelvic suppuration.*—Three cases, all fatal. Here there was a collection of pus in some portion or other of the pelvis shut off by adhesions from the general peritoneal cavity. These were all apparently hopeless cases in which an accurate diagnosis was impossible and an exploratory operation was therefore performed on admission. This series does not include cases in which pelvic suppuration occurred in the course of convalescence and in which the results were much better. 5. *General septicæmia without obvious lesion.*—13 cases, with four deaths. In each of these there was marked subinvolution of the uterus, but no evidence of retained placenta or of laceration. Probably most, if not all, were instances of septic endometritis.

The treatment adopted.—In all but eight cases the procedure adopted on admission was as follows. After thorough preparation of the parts the patient was examined in the operating theatre in the lithotomy position. At first a general anæsthetic was given, but latterly, on the suggestion of Sir William Sinclair, I have with advantage given alcohol internally followed by the hypodermic injection of morphine instead. The parts were then exposed by an Auvard's weighted speculum and the cervix steadied with volsellæ. Cultures were taken from the interior of the uterus, which was then curetted with a specially made instrument. This is shaped in general like a Sim's sharp curette and is made as light as possible. The cutting hoop, however, is pear-shaped and broadest at its extremity, where it measures an inch and a half across. After as thorough a removal of the endometrium as possible, the raw surface was swabbed thoroughly with undiluted izal fluid and the cavity was then packed with izal gauze, the vagina being loosely plugged also. Sometimes an intra-uterine douche of 1 in 500 izal solution was used also, but as a rule no douching was thought necessary at the time of the operation or subsequently. In two instances the curetting and swabbing were repeated on the next day. When curetting was not done laparotomy was performed for the reason stated in the table under each case. It will therefore be seen that the "routine" treatment of these cases consisted in vigorous disinfection of the uterus—a procedure which has frequently been described as almost necessarily fatal to the patient.

The objection usually urged against the use of the curette in septic conditions is that the barrier of leucocytes on the maintenance of which the patient's only hope of safety is supposed to lie is thereby disturbed, with the result that the organisms which it formerly restrained are free to make their way into the blood stream. It is, however, to my mind more probable that it is just in these cases of septic disease that the barrier is either useless or, more probably, non-existent and that what is wanted is something that will either take away or kill the organisms themselves. Moreover, though I have now examined sections from a somewhat large number of puerperal uteri in cases of septicæmia, I have only twice seen any signs of this barrier, even in cases where curetting had not been performed.

In this series the uterus has been removed as a last resource three times, once vaginally and once abdominally by myself, and once vaginally by Sir William Sinclair, who saw the case in consultation. In no case did recovery ensue. I have no experience of removing the uterus before the patient becomes intensely ill, as I should in any case try thorough local disinfection first. There can be no doubt that the shock following the removal by any method of the puerperal uterus is very great. There have been no cases in which thrombosed veins in the broad ligaments have been detected and ligatured; in fact, there have been no cases of thrombosis in any situation in this series at all. In three

PARTICULARS OF 49 CASES OF PUERPERAL FEVER DISCHARGED FROM MONSALL HOSPITAL, MANCHESTER, DURING 1906.

No.	Day of onset of fever.	Day of disease on admission.	Days elapsing between calling in of the medical man and admission to hospital.	Practitioner or midwife.	Forceps.	Curetting of uterus.	Other operations.	Serum.	Bacteriology of uterus.	Bacteriology of blood.	Complication.	Days in hospital.	Result.
1	Second.	Third.	—	P.	No.	Yes.	Incision of pelvic abscesses.	Yes.	Bacillus coli communis; streptococci.	Not examined.	—	218	Recovered.
2	Third.	Sixth.	—	P.	No.	Yes.	Incision of pelvic abscess.	Yes.	Streptococci.	,,	—	136	,,
3	Third.	Fourth.	—	P.	No.	No.	Laparotomy.	No.	Bacillus coli communis;	,,	Severe injuries and general peritonitis from instrumental dilatation.	95	,,
4	Fourth.	Third.	Same day.	M.	No.	Yes.	—	Yes.	,,	,,	—	38	,,
5	First.	Second.	—	P.	No.	Yes.	—	Yes.	No growth.	,,	—	36	,,
6	Fourth.	Third.	2	M.	—	Yes.	—	No.	,,	,,	—	25	,,
7	Fifth.	Fifth.	2	M.	—	No.	Laparotomy.	No.	Gonococcus.	,,	General peritonitis on admission.	81	,,
8	Fifth.	Fifth.	4	M.	—	Yes.	—	No.	No growth.	,,	—	39	,,
9	Sixth.	Fourth.	2	M.	—	Yes.	—	No.	Staphylococci.	,,	—	39	,,
10	Fourth.	Second.	—	P.	No.	Yes.	Laparotomy on admission.	Yes.	Streptococci; a bacillus of the coli group.	,,	Intestinal obstruction on admission.	51	,,
11	Seventh.	Third.	4	M.	—	Yes.	—	Yes.	No growth.	,,	—	30	,,
12	Sixth.	Third.	2	M.	—	Yes.	Vaginal hysterectomy.	No.	,,	,,	—	5	Died.
13	Second.	Fourth.	—	P.	Yes	Yes.	—	Yes.	Streptococci.	Streptococci.	—	48	Recovered.
14	Second.	Fourth.	—	P.	No.	No.	—	Yes.	,,	Not examined.	Extensive laceration from manual extraction of placenta.	47	,,
15	Seventh.	Sixth.	—	P.	No.	No.	Laparotomy.	No.	Streptococci; bacillus coli communis.	Streptococci.	General peritonitis on admission.	1	Died (24 hours).
16	Fourth.	Third.	3	M.	—	Yes.	—	No.	No growth.	Sterile.	—	2	Died (48 hours
17	Third.	Fourth.	—	P.	No.	Yes.	—	Yes.	Streptococci.	Streptococci.	Late pneumonia.	58	Died.
18	Second.	Fourth.	3	Neither.	—	No.	—	No.	Gonococci and streptococci.	Not examined.	General peritonitis on admission.	½	Died (12 hours).
19	Fifth.	Seventh.	—	P.	No.	Yes.	—	Yes.	Streptococci.	Streptococci.	—	50	Recovered.
20	Fourth.	Ninth.	—	P.	No.	No.	Laparotomy.	No.	—	Not examined.	General peritonitis on admission.	68	,,
21	Third.	Third.	2	M.	No.	Yes.	Vaginal hysterectomy.	Yes.	Streptococci.	,,	—	11	Died.
22	Eleventh.	Eighth.	8	M.	No.	Yes.	Laparotomy.	No.	—	,,	General peritonitis on admission.	79	Recovered.
23	Third.	Fifth.	—	P.	Yes.	Yes.	Laparotomy.	Yes.	Streptococci.	Streptococci.	Pyosalpinx.	60	,,
24	Fourth.	Third.	—	P.	No.	Yes.	—	Yes.	,,	Not examined.	—	34	,,
25	Eighth.	Third.	11	Neither.	No.	Yes.	—	No.	—	,,	—	24	,,
26	Second.	Third.	2	M.	No.	Yes.	—	No.	Streptococci	,,	—	28	,,
27	Second.	Second	—	P.	Yes.	Yes.	Laparotomy.	Yes.	,,	Streptococci.	General peritonitis on admission.	76	Recovered.
28	Second.	Tenth.	—	P.	Yes.	Yes.	Vaginal section.	No.	—	Not examined.	Pelvic abscess.	1	Died (24 hours).
29	Fifth.	Sixth.	—	P.	Yes.	Yes.	—	Yes.	Bacillus coli communis	Sterile.	Pyæmia.	97	Recovered.
30	Fifth.	Second.	4	M.	No.	Yes.	—	No.	Streptococci.	,,	—	24	,,
31	Third.	Seventh.	—	P.	No.	Yes.	Abdominal hysterectomy.	No.	,,	,,	General pelvic suppuration.	6	Died.
32	Fifth.	Second.	2	Neither.	No.	Yes.	—	No.	,,	,,	—	18	Recovered.
33	First.	Sixth.	—	P.	No.	Yes.	Laparotomy.	No.	,,	Streptococci.	General pelvic suppuration.	3	Died.
34	Fourth.	Third.	—	P.	No.	Yes.	,,	No.	,,	,,	,,	3	

PARTICULARS OF 49 CASES OF PUERPERAL FEVER DISCHARGED FROM MONSALL HOSPITAL, MANCHESTER, DURING 1906—(*Continued*).

No.	Day of onset of fever.	Day of disease on admission.	Days elapsing between calling in of the medical man and admission to hospital.	Practitioner or midwife.	Forceps.	Curetting of uterus.	Other operations.	Serum.	Bacteriology of uterus.	Bacteriology of blood.	Complication.	Days in hospital.	Result.
35	Fourth.	Fifth.	—	P.	Yes.	Yes.	Laparotomy.	Yes.	Streptococci.	Sterile.	Large pyosalpinx.	75	Recovered.
36	Seventh.	Fifth.	2	Neither.	No.	Yes.	,,	Yes.	—	,,	Pelvic suppuration.	45	,,
37	Second.	Fourth.	—	P.	Yes.	No.	,,	No.	Streptococci.	,,	—	½	Died (12 hours).
38	Fourth.	Second.	1	Neither.	No.	Yes.	—	No.	—	,,	—	19	Recovered.
39	Sixth.	Third.	—	P.	Yes.	Yes.	—	No	Streptococci.	,,	—	40	,,
40	Seventh.	Second.	—	P.	Yes.	Yes.	—	No.	,,	,,	—	32	,,
41	Third.	Second.	1	M.	No.	Yes.	—	No.	,,	,,	—	30	,,
42	Third.	Sixth.	5	M.	No.	Yes.	—	No.	,,	,,	—	44	,,
4	Fifth.	Fifth.	—	P.	No.	Yes.	—	No.	—	,,	—	49	,,
44	Third.	Thirteenth.	—	P.	Yes.	Yes	Pelvic incision.	No.	Streptococci; bacillus coli communis.	,,	—	54	,,
45	Fourth.	Fourth.	—	P.	No.	Yes.	—	Yes.	—	,,	—	32	,,
46	Fourth.	Fourth.	—	P.	No.	Yes.	—	Yes.	Streptococci; bacillus coli communis.	,,	—	32	,,
47	Sixth.	Third.	7	M.	No.	Yes.	—	No.	A bacillus not identified.	,,	—	40	,,
48	Eighth.	Fifth.	—	P.	Yes.	Yes.	—	No.	Streptococci.	,,	—	22	,,
49	Second.	Third.	4	M.	No.	No.	Laparotomy.	Yes.	,,	Not examined.	General peritonitis on admission.	1	Died (24 hours).

instances pelvic abscesses occurring in convalescence were opened extra-peritoneally through the vagina; all recovered. In another case the general peritoneal cavity was opened through the vagina; diffuse suppuration in the parametrium, together with a large tubo-ovarian abscess, was found. This case did not recover.

Serum treatment.—Antistreptococcic serum was given on admission to 20 patients, the dose ranging from 50 cubic centimetres in three cases to 200 cubic centimetres in three; the usual amount injected was 100 cubic centimetres. In these 20 cases streptococci were found in the uterus in 16 instances and in the blood also in five. The sera employed had been prepared in the Wellcome Research Laboratory at first from five cultures of streptococci obtained from material removed from the uterus and blood of cases treated at Monsall Hospital. Latterly more strains from other puerperal sources had been, I understand, added. So far I have been unable to discover any difference in the action of these two brands.

The whole subject of the use of bactericidal sera in puerperal fever is beset with difficulties, which have not been diminished by the publication of cases in which active local treatment has been adopted together with the administration of small quantities of a (possibly stale) serum and the result attributed to the serum only. My own practice is to give a polyvalent serum in all cases in which examination fails to discover any gross lesion and to any in which streptococci are subsequently found in the blood. I have never seen any ill effects from the sera except the production of transient rashes and, in some instances, of joint pains also. I feel, however, that the administration of a single dose of 10 or 20 cubic centimetres is almost useless and that it is better to give any quantity in one injection than in repeated small doses. The prevailing factor is one of time. The sooner it is given, the better.

It is not, of course, possible to come to any definite conclusions statistically from such a small series as 49 cases of puerperal sepsis. For most of the incidental remarks I have made I have drawn upon my previous experience also. As far as they go, however, the 1906 cases have strengthened my belief that in such a terrible disease as puerperal fever we must act as we should in any other variety of wound fever and try active local disinfection promptly, and that collections of pus, whether they be inside or outside the peritoneal cavity, must be treated by incision and drainage. As adjuncts to these surgical methods that have received due recognition in every other region of the body, such measures as the use of bactericidal sera and some drugs are occasionally useful, but they can never cure by themselves. As long as puerperal fever continues to be treated by vaginal douches and bottles of medicine only it will, I believe, always have a high mortality. It is, of course, better still to prevent its occurrence altogether.

Manchester.

CHLORETONE AND ITS USES, ESPECIALLY IN CHOREA.[1]

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IT has been said by an eminent French physician that what impresses the patient's friends is a correct prognosis, what impresses other medical men is an accurate diagnosis, but what impresses the physician himself is the occurrence of any decided benefit from the employment of a particular remedy. It is because we are naturally rather impressed with what is new than with what is already familiar that this statement may be regarded as applying to new remedies or new applications of old ones, and it is of such an impression, while still fresh, that I propose to speak to-day.

Chloretone, which is trichlor-tertiary-butyl-alcohol, is obtained by the interaction of chloroform, acetone, and an alkali. It is a white crystalline compound having a camphor-like odour and taste, and may be melted and sublimed at the body temperature. It is only slightly soluble in water but easily so in glycerine, alcohol, petroleum, or oil. The dose is from five to 25 grains in cachet or solution in one of the

[1] This paper goes over the ground of a recent lecture delivered at the Middlesex Hospital.

above-mentioned solvents. The first account of the drug in English medical literature is in THE LANCET of Jan. 13th, 1900, and so far as I am aware it was first employed by Messrs. Parke, Davis, and Co. in 1899 as a preservative for their solutions of adrenalin.

On account of its local anæsthetic effect I was prompted to employ this drug in painful and irritable conditions of the stomach, such as gastritis, cancer, gastrodynia, ulcer, and especially in those cases of pain, vomiting, and hæmatemesis so frequently associated with chlorosis and scarcely yet completely removed from the category of gastric ulcer, with which they are by no means identical. In doses of five grains or more in petroleum emulsion it has a remarkably soothing effect both on pain and vomiting and exercises a deterring influence on fermentation, resembling in this carbolic acid. It was while using chloretone for this purpose that its hypnotic effect became apparent, and I have since employed it satisfactorily in ten-grain doses simply to procure sleep, though the state of quietude induced by the smaller doses is itself a very great alleviation of painful and protracted illness, such as the gastric conditions to which I have referred.

The local anæsthetic effects have been found of value in vaginal pruritus as exercised by a 0·4 per cent. solution in warm water, or by five-grain suppositories in hæmorrhoids. The sedative effect on the brain, similar to that of the bromides but more rapidly induced, associated as it is with a similar effect on the stomach, led to its early employment for sea-sickness, and it is in connexion with this distressing malady that its reputation has chiefly been established. Five grains in powder taken a quarter of an hour before embarking will generally insure complete immunity from sickness during the Channel passage even in rough weather, and the drug does not appear to lose its efficacy by repetition, as is the case with some others. A young French lady, who was invariably ill during the crossing to Dieppe, since being fortified with chloretone has only once suffered and that in a way which suggests a useful hint in prescribing. Having performed the outward journey "tute, cito et jucunde" under the influence of one of the five-grain powders of which she was provided with four, the other three were carefully deposited in a purse against her return after the summer holiday. Then accompanied by a friend, to whom she promised immunity from the discomforts of the sea on the strength of this new remedy, she confidently embarked and proceeded to share the remaining doses. One paper after another was opened but all were empty. In the hot weather the chloretone had evaporated and vanished, leaving nothing behind but disappointment and the prospect of a miserable voyage, which was amply verified in both cases. As negative evidence this was distinctive testimony to the value of the drug and has been subsequently remedied by inclosing it in impervious wrappers such as paraffin paper.

When taken at intervals in similar doses longer voyages have been undertaken without discomfort—such, for instance, as that across the Atlantic. The drug was taken about 20 minutes before meals two or three times a day during rough weather and the journey was completed without a qualm. A more general knowledge of this remedy will certainly save a large amount of discomfort and in those who suffer continuously will enable journeys to be undertaken which were formerly dangerous or actually impossible.

I have dwelt upon these effects of chloretone as they have led up to its employment in another class of cases for which we have hitherto possessed no efficient remedy. I refer to chorea. During the past 12 months the opportunity has occurred of exhibiting the drug in some 14 cases and the result has been so striking and uniform that though the number is small it is worth making known that those who have wider opportunities may further test its reliability. In these cases, both boys and girls between the ages of seven and 12 years, five grains of chloretone in half an ounce of petroleum emulsion were given three times a day for two and sometimes three days; there was in all of them such a marked diminution of the choreic movements that the dose was then halved and sometimes given only twice and even once a day according to the severity and progress of the case. The number of days in which the drug was continued varied from five to ten, by which time it was omitted and either steel wine with arsenic or cod-liver oil was substituted to meet the anæmia and feebleness which usually accompanied the disease. Under this treatment the duration of choreic movements was limited to nine days and the stay in hospital to three weeks on an average. This is a great advance in the treatment of chorea, which even with the advantage of hospital *régime* usually extended to double and treble that time. These advantages consist in rest in bed with isolation and liberal dietary. When convalescing the patients were encouraged to knit or crochet or to use the hands in some such manner so as to practise purposive movements and also as a test of steadiness.

Many patients on admission were unable to feed themselves, experienced considerable difficulty in speech, and in some cases needed padding in their cots to prevent bruising in their uncontrolled movements. It was found that those cases which came under treatment early benefited most. Of the 14 which took chloretone, two were removed from the hospital before they were quite recovered on account of contracting rötheln, and two others resisted the treatment for a longer time—one, a girl, aged ten years, who had suffered from chorea for three years with short remissions, and another girl, aged seven years, who, after four months' chorea before admission, appeared rather to be cured by the relief of constipation, which had been a marked feature, this being effected in 21 days.

With any comparatively new drug exerting marked beneficial effects the question always arises as to drawbacks, and in the present instance there are some, though not of serious account. Two of the cases exhibited exfoliation of the skin on the hands and heels which gave rise to a suspicion of scarlet fever—one after ten days in hospital without fever or rash and the other shortly after removal on account of rötheln, of which there had been an outbreak in the hospital. The other 12 cases did not show this and the retention of one such case in the hospital and subsequent removal to the convalescent home did not lead to communication of scarlet fever to anyone else, so this exfoliation of the skin may be regarded as an occasional effect of the drug.

In two of the earlier cases treated, possibly owing to the physiological effect of chloretone being carried rather too far, there was marked somnolence, the child lying in any attitude in which he was placed and rousing only to take food. This passed off in a few hours on discontinuing the drug. The only other objection taken account of was the cost (4*s.* an ounce is somewhat expensive in hospital work), but considering the small quantity used and the comparative infrequency of the cases it is not serious and with increased demand it will no doubt be reduced.

As regards the permanency of the cure further experience is required; one of the cases cited was readmitted in about three months with a relapse, and on the other hand another was successfully treated which had relapsed after treatment by arsenic. Like the treatment of rheumatism by salicylates the effects of the specific drug requires to be followed by a tonic *régime* in most cases since the little patients are usually anæmic and feeble in addition to suffering from the spasmodic movements. Where endocarditis coexists salicylates can be combined with the chloretone or may be applied to the skin instead, but for the chorea itself chloretone appears to be as much a specific as the salicylates have come to be regarded in rheumatism.

Wimpole-street, W.

"PULMONARY HYPERTROPHIC OSTEO-ARTHROPATHY" OCCURRING IN A CASE OF CONGENITAL HEART DISEASE (?).[1]

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THE patient, a young unmarried woman, aged 21 years, was recently admitted to University College Hospital under the care of Sir Thomas Barlow, to whom we are indebted for permission to publish the notes of the case. The patient had suffered from palpitation, breathlessness, and blueness since birth. During the last ten years she had suffered from pains in the limbs, both in the ankles and wrists and in the shafts of the long-bones of the legs, more particularly after standing and walking. She had scarlet fever at the age of ten

[1] Report of a case shown at a meeting of the Clinical Society of London held on March 22nd, 1907.

years, but no other illness. There was no history of acute rheumatism or of syphilis in the family, the other members of which were quite healthy. The patient was very cyanosed and clubbing of the fingers, the toes, and the nose was well marked. A systolic murmur was heard over the præcordium, probably due to defect of the interventricular septum; it was best heard to the left of the sternum and in the third and fourth intercostal spaces, but was also audible at the apex beat of the heart and in the second intercostal space; it was not conducted towards the left clavicle. There were no signs of any of those diseases of the lungs which have hitherto been found associated with clubbing of the fingers and osteo-arthropathy; the tuberculo-opsonic indices observed on five separate occasions by Mr. D. Embleton were 0·96, 0·78, 0·96, 0·96, and 0·82. The blood examination showed 8,320,000 red corpuscles and 9300 white corpuscles per cubic millimetre; the percentage of hæmoglobin was 150 and the colour index was 0·94; the polymorphonuclear cells numbered 60·2 per cent., the small lymphocytes 19·9 per cent., the large lymphocytes 12 per cent., the hyaline cells 6·9 per cent., and the eosinophile cells 1 per cent. Besides the clubbing above referred to there was obvious swelling of both legs due to thickening of the lower ends of the tibiæ and fibulæ, and there was slight swelling of the bones of the forearms, of the wrists, and of the shafts of the metacarpal and phalangeal bones.

Radioscopic examination.—Compared with the corresponding bones of the patient's sister, who was quite healthy and of almost the same height and build, there was very considerable enlargement of the tibiæ and fibulæ of both legs, especially of the lower two thirds, more marked in the right limb; irregular bony deposits were present at the attachment of the interosseous ligaments to the adjacent tibiæ and fibulæ. The upper halves of the shafts of the femora showed increase of the mass of bone, but in a more marked degree, especially in the right leg; the head, the neck, and the lower halves of the femora appeared to be normal. The first and second phalanges of the fingers and thumbs, the metacarpal bones, the first and second phalanges of the toes, the metatarsal bones, and the bones of both forearms showed very slight thickening; there was no bony increase of the terminal phalanges of the fingers or toes.

This case is of special interest in several directions. In the first place it confirms the belief that Pierre Marie's sign-complex is not a feature of particular forms of lung disease only, such as bronchiectasis, tuberculosis, empyema, neoplasm, &c., for the patient was quite free from any signs or symptoms of pulmonary disease. The changes in the bones and the joint pains constitute "osteo-arthropathy" which, combined with clubbing, is known under the title given by Pierre Marie[2] as pulmonary hypertrophic osteo-arthropathy; the latter observer and Bamberger[3] considered that the genesis of this sign-complex depended on the effects of toxins formed in the lungs; we consider that everything points to the absence of any toxic focus in the lungs of this case; tuberculosis of the lungs, the most common infection in congenital heart disease, may yield no physical signs and yet be present; that this is not so in this case is shown by the existence of normal opsonic indices above quoted—a condition of affairs which could not occur if a tuberculo-toxin were circulating in the system so widely as to produce the above diffuse osteo-arthropathy. A mechanico-toxic cause of clubbing and of osteo-arthropathy has been advanced recently by Béclère[4] and by Groedel[5] and confirmed by an observation by Berent[6]; clubbing of the fingers has long been known to occur in one hand[7] in cases in which an aneurysm has caused interference with the circulation of the limb and Groedel and Berent have shown that bone changes may also occur in such cases; the toxic substance or substances must in these cases be generated locally and be derivations of tissue metabolism. Their retention, owing to the obstructed circulation, is considered to be responsible for the clubbing and for the bone and joint changes. We consider that this case gives support to the view of Béclère and of Groedel because the greatest bone change is noticed in the lower extremities, gravity tending to increase the stagnation of the blood in these parts; that mechanical obstruction is in the first place responsible for the change is also shown by the fact that the patient has suffered for as long a period as ten years frequently and immediately from pain in the lower limbs on standing or walking.

This case is finally a unique one, for, so far as we are able to ascertain, there are no other reports in the literature of cases of congenital heart disease being associated with Marie's sign-complex in the absence of lung disease; Bamberger's eighth case was one of congenital heart disease but was complicated by the presence of tuberculosis, and Thorburn's[8] case (footnote to his paper), though occurring in a boy, is not stated to be due to congenital as opposed to acquired heart disease; the latter association has been established by Bamberger. The distribution of the changes, mainly in the lower extremities of our case, is also very unusual and, as already stated, in the absence of any focus of disease in the lung supports the view that clubbing and osteo-arthropathy are due to the effects of tissue toxins normally generated at the periphery but prevented from being rapidly removed owing to the impairment of the circulation, in our case dependent upon congenital heart disease, in others upon the existence of lung disease, of acquired heart disease, and even, it is stated, of impaired action of the diaphragm in cases of hypertrophic cirrhosis of the liver.

[2] Pierre Marie, Revue de Médecine, 1890, tome x., p. 1.
[3] Bamberger, Zeitschrift für Klinische Medicin, 1891, Band xviii., S. 193.
[4] Béclère: Semaine Médicale, 1901, p. 94. Bulletins et Mémoires de la Société Médicale des Hôpitaux, 1901, vol. xviii., p. 283. Gazette des Hôpitaux, 1904, p. 754.
[5] Groedel: Münchener Medicinische Wochenschrift, 1906, S. 264.
[6] Berent: Berliner Klinische Wochenschrift, 1903, S. 75.
[7] Sir Thomas Smith: Transactions of the Pathological Society of London, 1871, vol. xxiii., p. 74. Canton: Ibid., 1885, vol. xvii., p. 428. Ogle: Ibid., 1858, vol. x., p. 103.
[8] Thorburn: Brit. Med. Jour., 1893, vol. i., p. 1155.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

TWIN OVUM IN A TUBAL PREGNANCY.

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THE rarity of the above condition lends interest to the accompanying illustration from a case recently under my care.

The patient, aged 39 years, married in January, 1890, had a miscarriage at about three months in May of the same year, had a uterine polypus removed 12 months later, and in February, 1892, was delivered of an eight months' child.

Twin ovum in tubal pregnancy.

In 1896 she had a "false conception" (the description seems to point to hydatid mole), followed by an attack of peritonitis

lasting about five months. She suffered frequently from pelvic pain and occasional leucorrhœa till the present illness. Her last menstrual periods were July 12th, July 22nd, and August 12th of last year, since when she had intermittent brownish discharge and dull, aching pelvic pain. She suspected that she was pregnant. On Sept. 27th, about 8 A.M., she was suddenly seized with severe pain in the left pelvis and hypogastrium and sent for me. Examination of the breasts bore out her suspicion of pregnancy and per vaginam the true nature of the condition was diagnosed by the feeling of an hæmatocele filling the left pelvis. After rallying from this attack she, about 1 P.M., showed signs of collapse from internal hæmorrhage and consented to immediate operation. On opening the abdomen a placenta and two fœtuses were found separately among a huge mass of blood clot which was rapidly removed and the ruptured tube brought up to the wound, its ends tied in one grasp of the ligature, then cut away and the stump returned to the pelvis. The peritoneal cavity was flushed out with hot saline solution, at least a quart being left in when the wound was closed. The patient was back in bed again within 20 minutes of the commencement of the anæsthetic and made an uninterrupted recovery. She remains, six months after the operation, in excellent health. In our anxiety for the welfare of the patient we unfortunately allowed the placenta to be thrown away in the process of tidying up, thus leaving the specimen incomplete but as it is it may be considered worthy of reproduction. One fœtus may be seen to be still enveloped in a separate amniotic sac.

I am indebted to Mr. E. Allan for his assistance at the operation and to Mr. F. E. Daniel for photographing my gelatin preparation of the specimen.

Barrow-in-Furness.

A CASE OF SUPPURATING HYDATID OF THE GALL-BLADDER; OPERATION; RECOVERY.

BY ARTHUR G. L. READE,
SENIOR HOUSE SURGEON TO THE RADCLIFFE INFIRMARY, OXFORD.

A MAN, aged 31 years, a labourer, was admitted to the Radcliffe Infirmary and County Hospital, Oxford, under the care of Dr. W. T. Brooks, on Sept. 24th, 1906, complaining of acute abdominal pain. He had always been a healthy man until August 22nd, when he was in this hospital under the care of Mr. H. P. Symonds suffering from biliary colic. At that time his stools were white and his urine was dark brown; the conjunctivæ were yellow. There was nothing to be made out in the abdomen and, as he refused operation, in a fortnight's time he was discharged, as by that time he had recovered. He remained well until Sept. 22nd, when he was suddenly seized with sharp pain in the stomach and back which doubled him up; he vomited several times and sweated with pain. This pain had been continuous and the vomiting was so persistent that he could retain no food. The bowels were opened on the 23rd, since which date he had begun to get yellow. He had had no sleep for the last two nights on account of the pain; his urine was very dark in colour. He had never been abroad and there was nothing of importance in the family history. His condition on admission was as follows. The patient lay on his back with his knees slightly drawn up, he had an anxious expression, and his respirations were hurried. His face had a yellow tinge and the cheeks were red. His temperature was 103·8° F., his pulse was 120, and his respirations were 28; the conjunctivæ were markedly yellow and the tongue was furred. On examining the abdomen it was noticed that the skin was yellow and movement was very slight. There was marked fulness in the epigastrium. On palpation there was definite resistance in the epigastrium towards the right side and the abdomen was exquisitely tender above the umbilicus. Nothing was to be made out in the lower part of the abdomen. On percussion resonance over the upper part of the abdomen was impaired; there was liver dulness to the fifth rib. The patient had a bad night, only sleeping when under the influence of morphine; on the next morning the temperature fell to 98°, but the pulse remained 120, and a blood count showed marked leucocytosis (19,000). The patient was transferred to Mr. Symonds's care and at 3.30 on that day (the 25th) was operated on. An incision about four inches long was made to the right of the mid-line over the region of the gall-bladder and on opening the peritoneum a little free fluid escaped. The gall-bladder was found to be distended and on opening it, the rest of the peritoneum having been packed off as far as possible, a considerable quantity of pus escaped mixed with a large number of hydatid cysts. On exploring with the finger another cyst apparently in the liver substance was opened, which also contained pus and daughter cysts. The walls of these two cavities, which had now been made one, were sutured to the abdominal wall and a drain was put in. The rest of the incision was sutured. On the next day the patient was much better and daily continued to improve, though a very large quantity of bile escaped. Three weeks later the patient was again taken to the theatre and a purse-string suture was put round the neck of the cyst, tying in a Paul's tube, which drained the bile by a piece of india-rubber tubing attached to the tube away from the wound. Ten days later this was removed and the edges of the wound were cauterised. Under this treatment the biliary fistula closed about five weeks later, and on Dec. 29th the patient was discharged cured. He had been seen since his discharge and was keeping quite well.

Remarks by Mr. READE.—There are two interesting points in this case: first that the patient had never been abroad, nor was there any clue as to how he contracted hydatid disease; and secondly, that the daughter cysts gave rise to symptoms exactly like biliary colic followed by suppurative cholecystitis, of which nature the case was considered to be until operation. While very common in the liver the literature shows that hydatid disease affecting the gall-bladder is extremely rare. I find notes of eight acses, two of which occurred in this country. Mr. E. T. Burton reports a case under Mr. H. G. Barling's care in the *Birmingham Medical Review* of October, 1897. The patient's symptoms were very similar to those in the case here recorded. The duration of the acute illness was ten days and though he was admitted with a view to operation he was too ill to stand it and died three days after admission. Post mortem in addition to the cyst in the wall of the gall-bladder several daughter cysts were found in the bladder itself. Mr. Frederick Page reports a case in THE LANCET of April 9th, 1898, p. 995. This patient suffered from "bilious attacks"—i.e., epigastric pain and vomiting for five years; a tumour was felt over the region of the gall-bladder, which when explored proved to be a single hydatid cyst with no daughter cysts; this was removed and the patient recovered.

I am indebted to Dr. Brooks and to Mr. Symonds for permission to publish this case, but my description of Mr. Symonds's operation has not had the great advantage of his corrections.

A CASE OF DUPUYTREN'S CONTRACTION TREATED WITH FIBROLYSIN.

BY W. DUNCAN LAWRIE, M.D. EDIN., F.R.C.S. EDIN.,
HONORARY SURGEON TO THE BIRMINGHAM CRIPPLED CHILDREN'S UNION.

THE following case may perhaps claim to be of sufficient interest to be recorded in THE LANCET.

The patient, a man, aged 42 years, came under observation in November, 1906. The three illustrations here given speak

FIG. 1. FIG. 2. FIG. 3.

for themselves and thus obviate the necessity for a detailed description of the case. Fig. 1 shows the condition at the commencement of treatment. The patient could only come for treatment at the week ends and accordingly the contents of one of Merck's ampullæ containing 2·3 cubic centimetres of fibrolysin were injected on Saturday, Sunday, and Monday

of five successive weeks. Fig. 2 shows the result of this treatment. The infiltration of the palmar fascia was now limited to one band. It was previously much more diffuse. Fig. 3 shows the result after subcutaneous division of this band by one incision.

Llandudno.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ST. GEORGE'S HOSPITAL.

A CASE OF SKIN ERUPTION DUE TO CHLORETONE.

(Under the care of Dr. ROLLESTON.)

FOR the notes of the case we are indebted to Dr. Ivor Back, house physician to the hospital.

A girl, aged 15 years, was admitted to St. George's Hospital, under the care of Dr. Rolleston, on Feb. 19th, 1907, for choreic movements of sudden onset. She was at once put on five-grain doses of chloretone three times a day, in accordance with the plan of treatment carried out by Dr. W. E. Wynter. At first its beneficial effects were most remarkable and in four days all movements had gone (Feb. 23rd). This was followed by a slight relapse; the drug seemed to lose its effect on the patient. Early in the morning of March 2nd a rash was first noticed. Up to this time the patient had taken exactly two and a half drachms (150 grains) of chloretone. When first seen the rash was distributed over the front and back of the hand and forearm, and extended upwards as far as the elbow. It consisted of a number of flat-topped papules (rather like a lichen ruber planus). They were of a bright mulberry colour, varied in size from that of a pin's head to that of a pea, and did not show any tendency to run together. They faded on pressure but quickly returned. The rash itched. The chloretone was at once omitted. On March 4th the eruption appeared on both ankles and in the sacral fold. On the 5th the eruption completely changed in character, consisting of a number of rings which were white in the centre and pink at the periphery. Their margins tended to coalesce, and it had somewhat the appearance of subsiding urticaria. The appearance of the eruption was at no time comparable to that of a rheumatic rash. On the 6th the eruption had practically disappeared. Up to the time of writing (March 26th) the patient has taken another 150 grains of chloretone, but there has been no further eruption.

Remarks.—Chloretone, or trichlortertiary-butyl-alcohol, was recommended verbally to us by Dr. Wynter as a successful drug in the treatment of chorea, and from our experience, since his recommendation, we can confirm his good opinion. The rash resembled in a general way the eruption due to chloralamide described by Dr. P. H. Pye-Smith in Vol. XXIII. of the Transactions of the Clinical Society of London, but did not show any subsequent desquamation as in his case. Dr. Wynter has told us that desquamation may occur in patients taking chloretone without any preceding rash, and we have observed this in a patient taking chloretone for reasons other than chorea.

UNIVERSITY OF OXFORD.—In a convocation held on March 20th the degree of D.C.L. by diploma was conferred upon the Right Hon. George Nathaniel, Lord Curzon of Kedleston, M.A., Hon. D.C.L., Chancellor-elect of the University.—John Freeman, D.M., University College, has been elected to a Radcliffe Travelling Fellowship.

CORNELIA HOSPITAL, POOLE.—At the annual meeting of the subscribers of the Cornelia Hospital, which has been recently held, it was stated that there was a deficit in the accounts of £862, which Lady Wimborne has generously offered to pay off. To the funds of this institution during the past few years Lady Wimborne has contributed several thousand pounds.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

The Operative Treatment of Hepatic Ascites.

A MEETING of this society was held on March 25th, Sir EDGCOMBE VENNING, a Vice-President, being in the chair.

Mr. LAWRENCE JONES read a paper on the Operative Treatment of the Ascites of Hepatic Cirrhosis. There was, he said, still much doubt as to the manner in which cirrhosis of the liver brought about ascites, and at present it seemed best to allow both portal obstruction and toxæmia as factors. Recent experiments of Herrick seemed to show that the portal obstruction was not due to pressure on the portal radicles by the new fibrous tissue but to the increased communications which formed in this disease between the hepatic artery and the portal vein, and this would account for the ascites which sometimes arose early in the course of cirrhosis. Ligature of the portal vein in animals usually failed to produce ascites, but this fact might be used against the toxæmic as well as against the obstructive origin of ascites, for the symptoms caused by ligature were those of toxæmia. On the other hand, thrombosis of the portal vein was frequently accompanied by ascites. Ascites was usually a terminal event in cirrhosis, but this was not always the case. The ideal patient for operative treatment was one who was still fairly young, with no suggestion of any other cause (such as cardiac failure) for the ascites, whose liver was in the hypertrophic stage, whose symptoms were more those of portal obstruction than of toxæmia, and who had recovered from one removal of a fluid—showing it to be of mechanical rather than of inflammatory origin. All operations aimed at the formation of fresh porto-caval communications which were usually effected by suture of the omentum to the abdominal wall. The operation might be intraperitoneal, as originally devised, or extraperitoneal, as in the operation of Schiassi, Bunge, and others. Many additions, such as hepatopexy, splenopexy, and the formation of intestinal adhesions, had been made to the original operation or performed when simple suture of the omentum had failed or had been impracticable. There seemed no doubt as to the value in certain cases of the operation. It appeared to relieve the patient from ascites and prolonged life in comparative comfort, perhaps for some years. No improving effect on the liver itself was claimed, although sometimes the operation seemed to check the cirrhotic process. The results obtained up to the present were fatal in about one-third of the cases, marked improvement took place in one-third, and little or no benefit in the remainder. The mortality usually given was too high, for many cases were included which died two or three weeks after the operation, and this should be ascribed more to a bad selection of cases or delay until too late than to the operation itself. The direct death-rate from the operation should not be more than 10 per cent.

Mr. W. G. SPENCER dissented from some of the opinions expressed. He thought that the subject should be considered apart from the liver, simply as affecting cases of fluid in the peritoneum or as if the case were one of chronic peritonitis. Each case must, however, be dealt with on its own merits. He referred to several cases in which various other abdominal conditions had been revealed at the operation apart from hepatic disease. One case previously recorded had revealed chronic peritonitis secondary to ovarian disease. Another patient went on with her drinking habits but had had no return of the ascites. As regards the precise method of operation, the German method with a six-inch incision and complex procedure was quite unnecessary. The mortality after the simpler operation which he had usually done was very small. It was very desirable to find out the underlying cause and the operation itself was often a means of revealing this and of effecting a cure.

Dr. F. DE HAVILLAND HALL also emphasised the importance of thorough medical investigation before undertaking operation. It was particularly necessary to exclude syphilis, and reference was made to cases of this kind recorded by the late Dr. J. S. Bristowe. The injection of adrenalin into the peritoneal cavity was often efficacious. From three to four drachms of adrenalin solution injected into the peritoneal cavity after tapping was the method which Dr. de

Havilland Hall commonly adopted. The operative procedure adopted by his colleague Mr. Spencer had a very low mortality and was attended with excellent results.

Dr. F. PARKES WEBER drew attention to the importance of temperature records being carefully made before operation. Many syphilitic cases were attended by an intermitting pyrexia, which disappeared under mercury and iodide of potassium. He also emphasised the value of the part which inflammation played in producing a favourable result.

Mr. A. E. J. BARKER also referred to the fallacy of syphilitic affections of the liver. In regard to the method of operation he emphasised the importance of producing firm and enduring adhesions; these were very difficult to accomplish under modern aseptic methods. Adhesions in these circumstances disappeared, as shown by successive operations on the same patient. On these grounds he advocated the extraperitoneal operation.

Mr. H. J. WARING believed that the best results were obtained when the operation was done as early in the stage of the disease as possible. He also discussed the significance of hæmorrhoids as proving the existence of definite portal obstruction. The best surgical measure, in his opinion, was to insert a portion of the great omentum into the sheath of the rectus abdominis muscle.

Dr. J. F. H. BROADBENT believed that it was better to wait until the abdomen had filled the second time. The choice of the case was important. Some cases of cirrhosis appeared to be independent of alcoholism. Very advanced cases, where the liver substance was in great part destroyed, were certainly not amenable to operative treatment.

Dr. F. J. POYNTON referred to a case of multiple inflammation of the serous membranes and asked whether any operation was available for such cases.

Mr. JONES, in reply, did not think that any operation was of use unless portal obstruction was definitely present.

CLINICAL SOCIETY OF LONDON.

Clinical Evening.

A MEETING of this society was held on March 22nd, Mr. H. H. CLUTTON, the President, being in the chair.

The PRESIDENT exhibited a case of Congenital Hypertrophy or Giant Growth of the Feet in a girl, aged 17 years, who was otherwise quite normally developed. The deformity, which was noticed by the mother at birth, slowly increased up to the age of 14 years. During the last three years the growth had been much more rapid, producing particularly a greater inequality in the length of the two lower extremities. The feet were enormous but were fairly equal in size, the distal parts being rather larger than the proximal. No cause could be assigned. The President proposed to do a Chopart's operation on the shorter leg and a Syme's operation on the longer.

Dr. H. BATTY SHAW and Mr. R. HIGHAM COOPER showed a case of "Pulmonary Hypertrophic Osteo-arthropathy" occurring in a Case of Congenital Heart Disease. The paper is published on p. 880.—Dr. A. E. GARROD referred to cases of osteo-arthropathy associated with cirrhosis of the liver.—The PRESIDENT suggested that the clubbing of the fingers represented the same process as osteo arthropathy.—Mr. W. G. SPENCER was not quite satisfied as to the existence of joint lesions in this case.

Dr. F. W. FORBES-ROSS exhibited a case of Operation after Rupture of a Pancreatic Cyst. The patient was a man, aged 71 years, suffering from prolapse of the rectum, who was suddenly seized on Oct. 17th, 1906, with pain in the left hypochondrium, shortly after which a tumour appeared in the same region, presenting a notched border. Abdominal abscess was diagnosed and two and a half quarts of pus were evacuated.

Dr. G. A. SUTHERLAND exhibited a case of Osteogenesis Imperfecta (? Syphilitic) occurring in a male infant, aged eight weeks, a first child. He was born after an easy labour and "the left wrist was seen to be broken and the arm to hang as if dislocated; the thigh and leg bones on the left side were broken." Multiple fractures in the long bones were shown in a skiagram taken seven days later. No fresh fractures were observed to occur. The child seemed to suffer great pain whenever his limbs were touched and cried for hours after he was born. At birth a lump was also noticed on the right side of the head. There was nothing of importance in the family history. On admission, four weeks ago, great pain and tenderness were present in the extremities, which presented periosteal swelling, especially around the epiphyses. A condition of pseudo-paralysis existed, movement being limited to the fingers and toes. Signs of fracture were manifest in all the long bones of the extremities and in many of the ribs. A swelling was present over the right parietal bone with a large irregular gap in the osseous tissue. There was general peeling of the skin over the trunk and extremities. The pain and tenderness in the limbs passed off, the periosteal swelling subsided, and the infant now moved the limbs freely. Marked deformities had resulted from the fractures which were now apparently united. Mercurial treatment had been carried out.—In discussing this case Dr. LEONARD G. GUTHRIE showed skiagrams exhibiting fractures of both femora and other bones in an infant under his care who died at the age of three months. Extreme tenderness and swelling had been noticed in the fractured limbs a week after birth. At the age of one month the cranial bones were thin and widely separated, and severe ophthalmia and a well-marked syphilitic eruption on the buttocks were present. Under mercurial treatment these symptoms had improved, but the infant died from marasmus. Post-mortem examination showed that all the fractures had united but with much deformity and with no ensheathing callus. This case, like Dr. Sutherland's, was syphilitic, but Dr. Guthrie doubted whether syphilis was the invariable cause of osteogenesis imperfecta. Might not imperfect osseous development be comparable to congenital myopathy? In congenital cases he thought that the fractures were sustained during pressure at birth and not during intra-uterine life. But there were other cases in which fragilitas ossium seemed to be acquired, the fractures not appearing until after a year or two of life. In one such case, a child, aged two and a half years, was found after death to have most of the long bones fractured, and the mother was charged with murdering the child. She was acquitted, however, on the strength of the medical evidence that *fragilitas ossium* rather than direct violence adequately accounted for the fractures.—Mr. SPENCER suggested that the condition might be due not to disease but to an arrest or delay of development; the skiagrams shown resembled those of a fœtus at about the sixth month. If this were so, later improvement might be wrongly attributed to mercurial treatment.—Dr. SUTHERLAND, in reply, said that in his opinion the present case was probably syphilitic; there was periosteal thickening about the epiphyses, the spleen was large, there was ulceration about the anus, and the case had responded to mercury. This case, therefore, should not be placed in the idiopathic but in the syphilitic group of osteogenesis imperfecta.

Mr. A. H. TUBBY showed a case of Facio-hypoglossal Anastomosis for Post-operative Paralysis occurring in a male patient, aged 19 years. An abscess was opened on April 27th, 1905, and when he recovered from the operation he found the left side of the face paralysed. On admission to Westminster Hospital there was facial palsy and the patient had lost all taste on the anterior part of the left side of the tongue. On Oct. 16th an anastomosis was carried out. An incision was made with a tenotomy knife deeply into the hypoglossal nerve and the distal end of the facial nerve was implanted into it laterally. On Oct. 23rd it was noted that the palpebral fissure was lessened in size and the eye could be temporarily closed. On Oct. 28th the patient began to move the left angle of the mouth. At present movement was almost perfect; there was slight atrophy of the left side of the tongue.

Mr. TUBBY also showed two cases illustrating the Treatment of Complete Paralysis of the Gastrocnemius and Soleus, with Talipes Calcaneus, by Nerve Grafting. The patients were both aged nine years and had old-standing poliomyelitis. The nerve branches to the muscles had been isolated and implanted into the external popliteal nerve. The results were excellent.—Mr. SPENCER thought that physicians should decide on a limit beyond which spontaneous recovery was impossible and then call in a surgeon.—Mr. TUBBY said that the distinction was not always clearly made between the direct effect of muscular paralysis and the secondary effects of contractures. If this were done surgical measures would often be resorted to earlier.

Mr. TUBBY also exhibited a case of Congenital Dislocation of the Hip.

Dr. F. PARKES WEBER showed a case of Acute Thyroid Swelling, with Acute Hæmorrhagic Œdema of the Right

Side of the Pharynx and Larynx, occurring in a male patient, aged 54 years. He had been under treatment for interstitial nephritis and had a blood pressure of 230 millimetres. On the afternoon of March 4th, his neck had suddenly begun to swell. On admission to the German Hospital at 7 P.M. the whole thyroid gland, especially the right lobe, was much enlarged, tense, and tender. There was likewise considerable general swelling of the neck and over the upper part of the sternum and there was great œdema of the right side of the pharynx and larynx. The pharynx was scarified and the patient was much relieved by a morphine injection, rest in bed, and the external application of ice to the neck. The swelling gradually subsided. At present (March 17th) the man felt almost in his usual condition but the thyroid gland was enlarged and the skin of the neck and the upper front part of the chest was discoloured, as from extensive bruising, and there was still much ecchymosis of the mucous membrane of the pharynx and larynx.—Dr. DAVID FORSYTH said that the anatomical structure of the thyroid gland made it improbable that a hæmorrhage occurring therein would produce symptoms such as those described, but Dr. WEBER replied that the effusion must have taken place into the thyroid.

Mr. H. BETHAM ROBINSON showed a case of Enlargement of the Clavicle and Lower Jaw. The patient was a boy, aged 13 years, with chronic inflammatory swelling of the right clavicle and the left side of the lower jaw dating from a fall six months before. There was some nodular enlargement of the right half of the thyroid gland. There had been some reduction in size under iodide of potassium

Dr. HARRY CAMPBELL showed a case of Disappearance of the Subcutaneous Fat above the Region of the Lower Extremities occurring in a woman, aged 21 years. The disappearance was especially marked in the face, chest, and abdomen, including the region of the mons Veneris. There was no disappearance of fat from the mammary glands or the orbits. There was an abundant deposit of subcutaneous fat in the buttocks and lower extremities generally. The patient was said to have been perfectly normal up to the age of seven years. From this time until the age of 14 years there occurred a gradual disappearance of fat from the affected regions.—The PRESIDENT compared the condition to morphœa.

Mr. DONALD J. ARMOUR showed a woman, aged 29 years, from whom a large Polycystic Kidney had been removed two and a half years previously. She had been quite unaware of the tumour and there had been no urinary symptoms.—Dr. PARKES WEBER referred to a recent case in which a French surgeon had removed what he took to be a cystic kidney but which proved at the necropsy to be a polycystic pararenal growth of Wolffian origin.

Mr. SPENCER showed a case of Obliteration of Bilateral Psoas Abscess. The patient, a woman, aged 25 years, had recovered, apparently completely, after several operations.—Mr. WARREN LOW referred to the advantages of closing the wound after operation in such cases.—Mr. SPENCER, in reply, said that it was at first impossible to do so in this case, as the sac was already septic when he first saw the patient.

Mr. A. E. J. BARKER showed a case, in a woman, aged 24 years, of Fixation of the Jaw. The left masseter was fibrous. —The PRESIDENT noted the elongation of the lower jaw and suggested alveolar trouble as the cause of the condition.

OPHTHALMOLOGICAL SOCIETY.

Thrombosis of the Cavernous Sinus.—Sympathetic Irritation. —Cysts of the Pars Ciliaris Retinæ.—Exhibition of Cases and Specimens.

A MEETING of this society was held on March 14th, Mr. PRIESTLEY SMITH, the President, being in the chair.

Dr. W. C. ROCKLIFFE (Hull) read notes of a case of Thrombosis of the Cavernous Sinus associated with Meningitis, originating in a septic sore on the upper lip. The patient was a fish-dock labourer whose general health but for occasional bronchitic attacks had been satisfactory. When first seen on Nov. 18th there was proptosis on the right side, with fixation of the globe, swelling of the lids, and chemosis. Five days previously a small pimple had appeared on the right side of the upper lip, which had been picked and eventually pricked with a pin. The lip and face became greatly swollen and were subsequently treated with a linseed-meal poultice. During the two days the patient was in the infirmary there was delirium and the temperature ranged from 102° to 105° F. A lumbar puncture was made and cocci were identified in the leucocytes. Cultures proved the infection to be staphylococcus pyogenes aureus both in the spinal fluid and lip. Death occurred on Nov. 20th, two days after admission and seven days after the spot appeared on the lip. At the necropsy the meninges about the cavernous sinuses were covered with lymph. The right and part of the left cavernous sinus and the transverse sinus were thrombosed. The orbital tissues on the right side were inflamed and swollen, but there was no pus. The case differed from one of cellulitis of the orbit, which did not tend to affect the opposite side.—Mr. J. B. LAWFORD cited a somewhat similar case of cavernous thrombosis in a man, aged 36 years, which resulted from a pustule in the nostril. There was cellulitis of the nose, face, and orbit. Death occurred in four days, though antistaphylococcic serum was given.

Dr. ROCKLIFFE also recorded four cases of Sympathetic Irritation occurring 18, 22, 28, and 50 years after injury to the other eye. In two of these cases a foreign body was found and a fragment of stone was probably present in the eye in the third case, the fourth being a punctured wound. Considerable ossification of the choroid was present in three.—Mr. E. TREACHER COLLINS commented on the wide field of discussion opened up by Dr. Rockliffe's communication. He thought that three of the cases were rather of the nature of sympathetic inflammation than irritation on account of the presence of keratitis punctata. In the other, glaucoma occurring in the second eye might be attributed to the shock of excision, as it not infrequently followed this. In reference to the specimens shown he said that ossification of the iris was unknown, though such change might occur in the adjacent choroidal processes or the capsule of the lens.

Mr. A. R. BRAILEY read a paper on Cysts of the Pars Ciliaris Retinæ and stated that clinically these structures had frequently been mistaken for sarcomata of the ciliary body, but little was known of their pathology, though their study might throw some light on the secretion of the aqueous fluid. They were found in such a variety of conditions that he was only able to classify them according to their apparent mode of origin. Two changes which played an important part in the origin of some varieties limited to the cells of the unpigmented epithelium were multiplication of the cells and vacuolation of the cell bodies. This proliferation was most frequently found in senile eyes and was commonly associated with hypertrophy of the ciliary processes. The cells of the pigmented layer appeared to play a mere passive rôle, and even in cysts arising by simple detachment of the epithelium it was the unpigmented layer alone which was affected, the adhesion between the pigmented epithelium and the underlying ciliary body being a peculiarly intimate one. The different modes of origin appeared to be: (1) detachment of the non-pigmented epithelium; (2) proliferation of the non-pigmented epithelium cells, with the formation of a cavity arising either by a simple separation of the cells or by their vacuolation and destruction; and (3) proliferation and union of the cells of adjacent processes, leading to a portion of the posterior chamber being shut off from the remainder. The number of the specimens was too small for him to come to any conclusion as to the relative frequency of these varieties. The contents of the cysts were usually lost during the preparation of the specimen, but when present they consisted of a deeply staining, homogeneous, coagulable fluid.

The following cases and card specimens were shown:—

Mr. F. F. BURGHARD and Dr. E. L. PRITCHARD: Cavernous Sinus Aneurysm cured by a new method after failure of the usual operation.

Mr. G. COATS: A case of Oxycephaly.

Mr. L. J. PATON: Oxycephaly.

Mr. W. I. HANCOCK: Peripapillary Atrophy.

Mr. COLLINS: A Corneal Affection in Myxœdema.

Mr. H. B. GRIMSDALE: Unusual Opacity in the Lens.

Dr. ROCKLIFFE: A Completely Calcareous Lens; Totally Ossified Iris (?).

LIVERPOOL MEDICAL INSTITUTION.

Exhibition of Cases.—The Treatment of the Acute Pathogenic Infections with Vaccines and Sera.

A MEETING of this society was held on March 21st, Mr. FRANK T. PAUL, the President, being in the chair.

Many cases of interest were shown, among them being:

Medical cases by Dr. A. G. GULLAN, Mr. F. A. POND, Dr. NATHAN RAW, and Dr. R. G. WILLIS; Surgical cases by the PRESIDENT, Dr. DAVID MORGAN, and Mr. K. W. MONSARRAT; Skin cases by Dr. H. LESLIE ROBERTS, Dr. F. H. BARENDT, Dr. G. G. S. TAYLOR, Dr. R. W. MACKENNA, Dr. W. C. ORAM, and Dr. E. L. ANDERSON; Eye cases by Dr. K. A. GROSSMANN, Mr. R. J. HAMILTON, Dr. W. E. LIVSEY, and Dr. A. N. WALKER; and Ear cases by Mr. E. M. STOCKDALE.

The PRESIDENT showed the following cases: 1. A boy, aged 11 years, who had been Scalded when two years old on the Side of the Chest. Subsequently the mother noticed a swelling in the region of the left pectoral muscle. This had gradually grown until it was now of the size of a hen's egg. It had been examined and found to consist entirely of muscle. 2. A case of Immense Hypertrophy of the Gums of Both Jaws, shown previously before the society and now cured. The gums were removed by four operations two years ago without extracting the teeth, and recurrence had taken place. A second series of four operations was undertaken with removal of the entire alveolar processes resulting in complete cure. (Models of the original condition were shown by Mr. F. J. M. PHILLIPS, dental surgeon to the Royal Infirmary). 3. A woman, aged 53 years, who had received an Injury to the Fifth and Sixth Cervical Nerves from a fall on the shoulder causing paralysis of the muscles supplied by those nerves.

Dr. RAW read a paper on the Treatment of the Acute Pathogenic Infections with Vaccines and Sera. He particularly mentioned the great value of antidiphtheritic serum if given early in pure cases of diphtheria but said that in mixed infections it did not seem to exert the same beneficial influence. He had treated 212 cases of erysipelas, puerperal fever, and other septic infections with anti-streptococcic serum and was convinced that in streptococcal infections the serum if given early had a marked curative effect. The use of a polyvalent serum had immensely improved the results of treatment. In the treatment of a large number of cases of tuberculosis he had come to the conclusion that tuberculin R. had not much curative value in phthisis pulmonalis, even in the early stages of the disease, but in the so-called surgical forms of tuberculosis, such as lupus, tuberculous glands, joints, and peritonitis, tuberculin R. had a most marked curative effect and his results of treatment of numerous such cases were astonishingly good. He was not favourably impressed with the value of antitetanic serum.—Dr. W. B. WARRINGTON considered antistreptococcic serum to be of little utility in medicine and pointed out that it was the recognition of this that led Sir A. E. Wright to introduce the method of vaccines. He alluded to the value of endoneural injection of the antitoxin in tetanus.—Dr. ERNEST E. GLYNN, commenting upon the very favourable results obtained by Dr. Raw with antistreptococcic serum in puerperal septicæmia, asked what evidence there was that the cases were true septicæmia and also due to streptococci, as cultures were not made in the majority of instances. Might not many have been cases of intoxication and recovery been the result of local treatment of the uterus? Dr. Raw's success in treating lupus with tuberculin uncontrolled by the opsonic index and unassisted by light treatment was not in accord with the experience of many, for lupus was very refractory. He was also surprised that Dr. Raw had cured three cases of tuberculous meningitis with tuberculin, especially as the opsonic index had not been taken.—Dr. A. S. PARKINSON said that the earlier tuberculin was given in pulmonary tuberculosis the greater the probability there was of a good result. He thought that the failure in advanced cases was sometimes due to secondary infection of the lungs by pyogenic organisms, and that the immunity of such patients against secondary infections should be raised as well as the treatment by tuberculin injections carried out.—The following gentlemen also took part in the discussion: Dr. TAYLOR, Dr. J. HILL ABRAM, Dr. B. SUMNER, Dr. N. E. ROBERTS, Dr. R. J. M. BUCHANAN, and Dr. ORAM.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Exhibition of Specimens.—Pubiotomy (Hebotomy).

A MEETING of this section was held on March 8th, Dr. R. D. PUREFOY, the President, being in the chair.

Dr. ALFRED J. SMITH exhibited a Uterus showing a Fibromyoma in the Fundus and Cancer in the Cervix. The patient was 40 years of age. Dr. Smith had diagnosed and discovered polypus of the uterus and had made up his mind to remove it as the cause of the hæmorrhage from which the patient suffered. During the removal of it he found an ulcerated spot in the cervix which under the microscope proved to be an adeno-carcinoma.—Sir ARTHUR V. MACAN said that the specimen was interesting as showing two things which were extremely rare in combination, though neither was rare by itself.

Sir ARTHUR MACAN exhibited specimens of Carcinoma and of Sarcoma of the Body of the Uterus. One of the patients was 50 and the other was 60 years of age.

Mr. E. HASTINGS TWEEDY, Master of the Rotunda Hospital, Dublin, described a case in which he had delivered a primiparous woman of a living child at full term through an internal conjugate measuring 6·5 centimetres by the performance of a left-sided hebotomy. Hæmorrhage had been very severe and had resulted in a considerable degree of collapse. Delivery had to be hastened because of prolapse of the cord, which took place before the operation was undertaken. Deep lacerations of the cervix, of the soft parts lying between the severed bone, and of the perineum occurred, requiring catgut sutures. The patient's recovery was uneventful and she left the hospital in perfect health in the ninth week with a living child.

Dr. M. J. GIBSON read a paper on Pubiotomy, with Notes on Three Cases. He said that the idea of improving the prognosis for the mother and child in cases of contracted pelvis, and of lessening the number of Cæsarean sections, inductions of premature labour, and perforations of the living child, by an artificial enlargement of the pelvis was a very old one. Symphysiotomy, first demonstrated by Courvée in 1655, was first performed on the living subject by Signault 100 years later. Symphysiotomy was not a very satisfactory operation. To Gigli belongs the honour of being the first to propose as a substitute for it an incision through the os pubis. The great danger in Gigli's operation lay in the large easily infected incision which he employed. Döderlein's subcutaneous pubiotomy was really a new operation, at once simple and effective. It was indicated in cases of narrow pelvis when the cervix was fully dilated and when, in spite of good contractions, the head moved freely about the brim. Good uterine contractions might by preparation of the maternal soft parts and by moulding of the fœtal head drive the latter through a pelvis so narrow that natural delivery could hardly have been expected. The operation might be performed in cases of flat pelvis with a conjugata vera up to 6·75 centimetres, and in generally contracted pelvis up to seven centimetres, but for these very low conjugates the head must not be larger or harder than normal. He adopted Döderlein's method in his cases. A small incision, sufficient to admit a finger, was made over the bone, usually at the left side between the symphysis and the tubercle. Döderlein's needle was passed down behind the bone and its point brought out in the greater labium. Gigli's saw was attached and the bone divided. The hæmorrhage was as a rule easily stopped by compression. The patient should not be delivered except it was absolutely indicated. After labour was completed a few strips of adhesive plaster were put around the pelvis, a binder was applied, and the patient was kept lying on her back for 12 days. She might get up on the fourteenth or sixteenth day. The advantages over symphysiotomy were that the undivided soft parts prevented the pelvis from springing suddenly apart, while the bladder and urethra were not so liable to injury during the operation. The operation was also more easily and more rapidly performed. He performed his first operation on August 16th, 1906; the patient was 34 years of age and had been pregnant nine times but had no living child. Premature labour had been induced twice. The pelvis was generally contracted with a true conjugate of eight centimetres. A child weighing 12 pounds was delivered without difficulty. The patient was walking about on the twenty-first day, and left the hospital with her child two days afterwards in perfect health. The second patient was 32 years of age and had also been pregnant nine times. Her second child was delivered with forceps and was still alive. She had premature labour induced three times. In her last pregnancy she went into hospital after being in labour for 14 hours. The cervix was fully dilated, the membranes were ruptured, and the fœtal head was small and was free above the brim. The pelvis was generally contracted and flat with a true conjugate of 7·5 centimetres. The fœtal pulse-rate reckoned from the heart sounds was about 160, but was very irregular. Meconium came away in large quantities. The mother had

lobar pneumonia and was in a very bad condition. Pubiotomy was performed and a child weighing six pounds was extracted with forceps. The mother had her crisis on the ninth day. Both left hospital on the twenty-fourth day in good condition. The third patient was a tripara, aged 29 years. Her second child was delivered with forceps, weighed 5¼ pounds, and was still alive. The pelvis was rachitic and flat; the conjugata vera measured seven centimetres. A child which lay transversely was easily delivered by podalic version after pubiotomy was performed. It weighed 7½ pounds. The three infants were breast-fed. None of the women complained of pain or showed any difference from a normal confinement, except, of course, the second one, who was suffering from pneumonia. The maternal mortality so far was about 3 per cent. He thought that there was a great future for this operation and that it would never share the fate of symphysiotomy but would remain a means of overcoming the difficulties connected with the lesser degrees of contraction of the pelvis without injury to the mother or child.—Sir ARTHUR MACAN said that he had seen pubiotomy performed with ease by an operator who had never done it before. There was nothing in it which could not be done by a man who had been through the Dublin school. By it the practitioner in the country might save both mother and child in cases where he had put on the forceps but had failed and was face to face with perforation.—Dr. THOMAS NEILL said that with this operation the risk of sepsis would be less than in the induction of premature labour.—Dr. HENRY JELLETT said that it seemed to him that in doing Cæsarean section on a perfectly healthy patient, unweakened by the long continuance of labour, they were more certain of the after results. On the other hand, he certainly agreed that, in cases where the forceps had been tried and failed, pubiotomy had got its place and would keep it. The ease with which it was performed, the small amount of assistance required, the small extent of the wound, and the short time in performance, would be important factors in producing a small mortality.—The PRESIDENT said that he could not see how pubiotomy could take the place of Cæsarean section in certain cases. He thought that its danger had perhaps been passed over too lightly. The danger of injury to the bladder had been amply demonstrated by recorded cases. The danger of hæmorrhage must, he thought, be considerable, since a fatal case had been reported from Vienna. He could not help wondering whether the locomotive powers of the patients had been satisfactory afterwards in all cases, or whether sufficient time had elapsed to enable an opinion to be formed on the point. He agreed, however, as to the value of the procedure.—Mr. TWEEDY, in reply, said that while both symphysiotomy and hebotomy had come to stay he did not think that either of them would prove a panacea. He had performed both operations with equal ease.—Dr. GIBSON, in reply, said that as regards the chance of injuring the bladder it must be remembered that in pubiotomy the pelvis was well protected by the undivided soft parts. The bladder was never so intimately connected with the pubic bone that any tearing could result from the small amount of stretching undergone, except when owing to a previous puerperal sepsis there were adhesions between the bladder and the bone. This occurred very rarely. A French author had stated that the ends of the bone could separate up to eight centimetres without injury to the bladder or articulations. If bleeding could not be stopped by compression the practitioner could open the wound and find where the bleeding was coming from. Pubiotomy was, he believed, a safer operation than Cæsarean section up to a certain point—i.e., a pelvis with a conjugate vera measuring above 6·75 centimetres. The latter was better done at the beginning of labour, therefore there was no chance of seeing what the contractions would do, and no matter how well it was done there were cases on record where the cicatrix gave way afterwards. In both operations if performed aseptically union would be equally good, but the danger to the bladder and urethra was much greater in symphysiotomy than in pubiotomy and the former was also a more difficult operation and therefore not so well suited for the country practitioner

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BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A meeting of this society was held at Hastings on March 16th.—After a short address of welcome by the Mayor of Hastings Dr. William Ewart introduced a discussion on the Present Position of the Treatment of Tuberculosis by Marine Climates and began with some general remarks on sea air, sea water, sea bathing, sea voyages, and the pharmacology of the sea, and with a brief reference to Quinton's subcutaneous sea-water infusions. Ocean climate, he said, differed from all others in its exclusively marine character and its equability in contrast with the sea-coast climates, which were the most variable and offered endless combinations between the features of the coast and those of the sea, none of them being necessarily the ideal one for consumption. The effects of the seaside and sea air were mainly dependent on the patient's power of "reaction" on the one hand, and on the other hand upon the all-important effect upon the tendency to catarrh. Touching the forms of tuberculosis Dr. Nathan Raw had recently urged an etiological and clinical distinction between the infection from the "bovine" bacillus and that from the "human" bacillus which agreed well enough with their climatological data and practice, all assumedly "bovine" infections (surgical, glandular, scrofulous, cutaneous, serous, and visceral, other than pulmonary) being almost unreservedly benefited by the sea. This was not always the case with the pulmonary affection for which alone the "human" bacillus infection would be to blame. The multiple types evolved by individual predispositions (constitutional, organic, and functional) fell into the two groups of uncomplicated tuberculosis and of catarrhal tuberculosis or phthisis pulmonalis. In the first group tuberculosis might be "latent" and healing or "declared" and spreading. In the second (which included the acute caseous form) catarrh was the chief agent of mischief as well as the first object of climatic treatment. To describe as "consumptives" the bearers of latent and spontaneously healing tubercles would be inaccurate; and, on the other hand, "tuberculosis" did not depict the varied miseries of catarrh, of pneumonia, and of caseation in the painful record of advanced consumption. Bacillary infection ("tuberculosis") might mean little or much damage and "consumption" (or in the Greek vernacular "phthisis") was always a big affair and in pathology it spelt "catarrh." They now had to reverse the famous dictum of Niemeyer and to recognise that "the worst fate that can befall the patient infected with tubercle is that he should develop phthisis." The aërotherapeutics of tuberculosis were thus, practically speaking, those of catarrh. But whereas sea air was curative of some forms of simple non-bacillary bronchitis it was not always sufficiently dry for the cure of catarrh based upon tubercle. Whether they considered the meteorological factors or were guided by the results observed clinically it could not be gainsaid that the altitude was likely, and proved itself, to be more effectual in obviating early catarrh and curing it at any of its stages than the climate of the coast. But as they had not any altitudes available in this country they should adopt an opportunist policy and make the most of their unrivalled assortment of "protecting" and "bracing" seaside resorts by careful selection of cases, by progressive elaboration of their clinical treatment, and by measures tending to correct any imperfections of the local climates. The "bracing" resorts possessed the highest restorative efficiency, but their suitability for pulmonary tuberculosis was limited. The present position of the treatment by marine climates rested upon the recognition of the fact that mere "airing" and "salting" were not competent in themselves to cure the pulmonary complications of the disease when it affected the lungs. "Open air" and "sea air" were a basis for treatment, but could not supersede the scientific methods of modern therapeutics. The marine resorts should add to their natural resources increased facilities for a systematic treatment planned upon a combination of the hospital idea and of the sanatorium idea.—Mr. Henry Colborne (St. Leonards-on-Sea) read a statistical paper in which some facts and figures were set forth as to the temperature, rainfall, bright sunshine, and climatic conditions of Hastings, covering a considerable period.—Dr. A. Scarlyn Wilson (St. Leonards-on-Sea) said that examination of the mortality statistics showed that since 1898 there had been a marked decline in the number of deaths from phthisis registered in Hastings. This reduction was so great (nearly 35 per cent. comparing 1898 with 1906) as to make it reasonable to infer that the stream of phthisical patients which formerly flowed in this direction had been partially diverted into other channels, probably towards the inland sanatoriums which had recently sprung up. If other seaside resorts had been similarly affected a great change must have taken place in the opinion of

the medical profession as to the value of marine stations in the treatment of active phthisis.—Dr. D. Anderson-Berry (St. Leonards-on-Sea) wished to emphasise certain points: (1) that there was no single method whereby phthisis might be successfully treated; drugs had their place as well as open air and other hygienic methods; and (2) that the patients who did well at marine stations were those whose opsonic index showed a considerable power of reaction present, especially when tested by injections of tuberculin. In answer to a question asked he would add that such a climate as that of St. Leonards was especially favourable in his experience to cases of emphysema upon which had been grafted tuberculous processes.—Dr. F. Bagshawe (St. Leonards-on-Sea) pointed out that Dr. Henry Bennet was an early advocate of the treatment of phthisis by the open-air method. All his patients at Mentone were enjoined to have their windows open night and day and to spend much time reclining in the garden. The importance of rest was especially enjoined. Looking back upon an experience of 40 years at Hastings he was able to point to a long list of patients who had lived through the active stages of pulmonary tuberculosis and had settled down to spend long lives, with arrested damage, some partially, some entirely, cured.—Mr. George Pernet (London) desired to call attention to the importance of general treatment in tuberculosis of the skin, especially as regards marine climates.—Dr. F. J. Wethered (London) said that it might be accepted that the treatment of pulmonary tuberculosis in marine climates was practically one form of the "open-air" treatment of the disease, the essentials of which might be obtained *par excellence* at English seaside resorts. He laid stress on the importance of studying "individualism" in the selection of cases to be sent to marine climates.—Dr. P. G. Lewis (Folkestone) said that so long as there were consumption hospitals in congested areas, as the City-road and Brompton-road in London, it would be necessary to try to convert the leaders of the profession to the imperative need for treating phthisis out of large cities. He criticised sanatorium treatment and advocated the advantages of marine climates for the treatment of most forms of tuberculosis.—Dr. Leonard L. B. Williams (London) said that sanatoriums were doing a fine work, not so much in curing phthisis as in educating the public in open-air methods. Marine climates could offer no such advantages, because climate without method was useless.—Dr. St Clair Thomson (London) spoke in emphatic terms of the necessity of instruction concerning the open-air methods carried out in the inland sanatoriums.—Dr. W. J. Tyson (Folkestone) spoke in favour of marine climates in the treatment of tuberculosis.

MEDICO-LEGAL SOCIETY.—A meeting of this society was held on March 12th, Mr. Justice Walton, the President, being in the chair.—A discussion was held on the working of the Midwives Act, 1902.—Mr. J. Theodore Dodd (barrister-at-law) dealt with the two practical points which arose—(1) when the certified midwife was bound by her regulations to send for medical aid; and (2) the payment of certified midwives at such a rate as would attract a competent and better class of women. As to the former, it was not the duty of the medical officer of health to help at birth, and hence the necessary aid must come from the Poor-law. In principle the law provided such assistance but in practice it was difficult to obtain. Medical relief was only given to the destitute, others had to enter into an agreement to repay the cost, and for a matter of emergency the necessary proceedings were too leisurely and led to too great a delay. A letter from a certified midwife to a medical man should be a sufficient claim upon the guardians in cases of poverty. He would have midwives attached to the Poor-law medical staff as was already the case in Ireland; otherwise, to avoid the stigma of pauperism, midwives should be on the staff of the medical officer of health.—Dr. F. S. Toogood (Lewisham Infirmary) said that Poor-law guardians would object to their privileges being handed over to certified midwives; district medical officers relied upon the extra midwifery fees to make their posts worth being held and would resent the introduction of competing midwives.—Sir William Collins, M.P., said that when he was a member of the London County Council he had objected to having to fetch and carry for the Central Midwives Board, as also to allowing the coöption of irresponsible persons to the Midwives Act (Special) Committee; the local supervising authority should have been given proper control and not power to send forward mere indefinite and anonymous charges against midwives. The London County Council was offering annual scholarships to would-be midwives.—Miss Wilson (President of the Midwives' Institute) said that she had been on the Central Midwives Board for four years and was well acquainted with the subject. Midwives were poorly paid, their work was not peculiarly attractive, and of those who were now being examined by the Central Midwives Board at least one-half were not going to attend the poor but were intending to take up monthly nursing or other well-paid work. If only efficient midwives were available the preventive work that they could do in guarding the health of poorer mothers would obviate to a large extent the need of sending them to the local infirmary, which act also often implied robbing the home of its mainstay. It was not the function of the Central Midwives Board to regulate the supply of midwives; 12,000 certified women were in private practice in England and Wales, only one-third of whom had been properly trained. That the Poor-law could help midwives in difficulty was shown by the recent action of the guardians of King's Norton and Birmingham, who for one year had allowed midwives to summon the district medical officer without the usually indispensable order of a relieving officer. Poor-law medical officers were called in now more frequently than formerly; this was an admitted hardship where the salary was an inclusive sum. The Irish system of having dispensary (Poor-law) midwives had many advantages; although its adoption in England as it stood might not be advisable it was practical and full of suggestions.—Dr. A. H. Downes (Local Government Board), premising that his remarks were not to be regarded as in any way an official declaration, said that the first object in the working of the Midwives Act, 1902, should be to facilitate the provision of proper aid to women in labour. He was surprised to hear it stated that it was not the function of the Central Midwives Board to consider the supply of midwives; it was certainly not the province of the Local Government Board, nor was there any basis for the extraordinary misapprehension that the Local Government Board desired to establish a second standard of training for certified midwives. With regard to the provision of medical assistance in cases of difficulty, he thought that more power existed than had been suggested in the discussion. Thus, an Act of 1848 (11 & 12 Vict., c. 110, s. 2) enabled the guardians of any union, if they thought proper, to pay for any medical or other assistance rendered to any poor person on the happening of any accident, bodily casualty, or sudden illness, although no order had been given by any of their officers or by the overseers. This power had been acted upon in some unions long before there was any question under the Midwives Act, and the attention of guardians had been drawn to it by the Local Government Board on various occasions since the Act. The action of the guardians under the 1848 statute, however, was entirely discretionary; there was no guarantee that the medical practitioner would get his fee in all cases, and it was a doubtful point whether compulsory powers should be granted, in which case the State would tend to become a debt-collecting agency. In some cases sanitary authorities had availed themselves of a provision of the Public Health Acts (s. 133 of the Act of 1875; s. 77 London Act, 1891) for the furnishing, with the sanction of the Local Government Board, of temporary medical assistance for the poorer inhabitants of their district, although originally this was probably only intended to apply to epidemic disease.—The President said that he feared any change which would weaken the tie of parental responsibility; he saw also a great difference between a voluntary charity and the legal obligation to support others. It might possibly be enacted that a certified midwife should, on her own responsibility, send for a medical man in cases of difficulty: he should be paid by the guardians in necessitous cases, otherwise the husband should be responsible, even although he were not privy to the contract.—Mr. Theodore Dodd, in reply, said that the Local Government Board might settle the whole question by the issue of a circular to boards of guardians and that it was not fair that women and infants should suffer and die because of a quarrel between medical men and midwives.

MIDLAND MEDICAL SOCIETY.—A meeting of this society was held on March 13th, Dr. Arthur Foxwell, the President, being in the chair.—Mr. C. A. Leedham-Green showed an example of a rare condition in a female child on whom he had operated with success for a Prolapsed and Inverted Bladder. The operation consisted, after the replacement of the prolapse, in the injection of

a small quantity of liquefied hard paraffin into the peri-urethral tissue at the neck of the bladder.—Dr. J. Douglas Stanley showed a case of Osteitis Deformans. The patient was a woman, aged 60 years, who had complained of pain in the back and legs for some years. There was also pain in the right knee. She noticed 18 months ago that the right leg and thigh were "getting bent and that she was going lame." About the same time she began to stoop. On examination well-marked kyphosis was found; the right leg and thigh were bent forwards and outwards; the tibia and femur were massive, presenting the typical appearance of Paget's disease. The left femur and the right humerus were similarly affected to a slight degree. The skull showed no abnormality nor were there any signs of tumour formation.—Dr. Stanley also showed for contrast a woman suffering from Syphilitic Osteitis affecting the Right Tibia.—Dr. O. J. Kauffmann showed a man, aged 28 years, suffering from very pronounced Saltatory Spasm, coupled latterly with frequent severe hystero-epileptic attacks. The patient had been epileptic ever since his fifth year and until December, 1906, he had been subject to true epileptic seizures about once in every six weeks, but his mind had remained normal and he had been in regular employment as a clerk. In December he had been attacked with influenza which had kept him in bed for about a week. On the day after rising from bed the jumping spasm had begun and, despite energetic treatment by bromides, had gradually increased in strength. Five days before his exhibition the patient had suddenly commenced with violent hystero-epileptic convulsions. At the time of his exhibition the saltatory spasm was so intense that he was unable to stand without support. The spasm was rendered more intense by being observed and when the patient lay in bed it took the form of occasional sharp flexions of the thighs on the trunk.—Dr. J. G. Emanuel showed a girl, aged 15 years, suffering from clonic spasms of the left arm and left leg of six weeks' duration appearing after a fright caused by the barking of a dog. The movements for the most part consisted of alternate supination and pronation of the hand, combined with eversion and inversion of the foot and flexions of the trunk on the thighs. Some three years previously the patient had experienced a similar attack, lasting two or three months, also brought on by fright caused by a dog. At this time she was acquainted with another child suffering from chorea. The case was described as one of complicated habit-spasm or habit-chorea brought on by fright in the production of which mimicry apparently played a part.—Mr. J. Jameson Evans showed a woman, aged 34 years, the subject of Graves's disease, who exhibited new signs. The exophthalmos was confined to the left eye, but the pigmentation of the eyelids (Teillais' sign) and marked difficulty in everting the lids (Gifford's sign) were present on both sides.—Dr. James E. H. Sawyer showed a specimen of Malignant Growth of the Heart. The patient's left leg had been amputated for an osteo-sarcoma of the lower end of the femur of four months' duration but she died three months later from secondary growths in the heart. The right auricle contained one small nodule of secondary growth. The outline of the right ventricle was irregular in shape owing to the growths in its walls and it was necessary to use a saw to open the ventricle. Most of the growth projected into the cavity of the ventricle and consisted of round hard nodules of osteo-sarcoma. Many of these growths were freely moveable, being attached to the ventricular wall by narrow pedicles. There were no deposits in the left side of the heart but there were many in the lungs and pleuræ.—Dr. J. Miller showed specimens from a case of Early Acute Poliomyelitis occurring in a boy, aged nine years, the total duration of whose illness was less than a week. On admission to hospital he complained of pains in the back of his neck; his legs and his abdominal muscles were paralysed and the reflexes, with the exception of the pupil reflex, were absent. Before death the arms and the chest muscles gradually became paralysed. The necropsy revealed a softening and swelling with congestion and scattered punctate hæmorrhages affecting especially the fourth, fifth, sixth, and seventh cervical segments and to a less marked extent the whole of the spinal cord. A pure growth of staphylococcus pyogenes citreus was obtained from the grey matter. Microscopically there were found dilatation of the vessels passing into the grey matter, infiltration of the perivascular lymph spaces with large numbers of cells, hæmorrhages into the grey matter of both anterior and posterior horns, and degenerative changes in the cells of the grey matter. There was no evidence of thrombosis in the vessels.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—A meeting of this society was held on March 15th, Dr. G. A. Sutherland being in the chair.—Mr. Russell J. Howard read a paper on Tuberculosis of the Testis in Infants. The condition, he said, was rarer in infants than in adults owing to the period of active function not having arrived. It was rare in the undescended testis. Tuberculous peritonitis was a frequent complication. If one testis only was affected and general treatment was not successful the testis might be removed without bad effect on the mental and bodily growth, but if both testes were diseased they must only be removed as a last resource owing to the impairment of bodily and mental vigour produced by their ablation.—Mr. Howard also showed a specimen of Teratoma from the back of a child, aged six years. The tumour, five inches long, was situated on the sacrum and coccyx. It consisted of several different parts; a large structure resembling a kidney in a serous sac was below and a mass of cysts above. Bone, lymphoid tissue, and cartilage were also found. The tumour was very vascular. The large kidney-shaped mass consisted of interlacing tubules lined with a columnar-celled epithelium, with lymphoid tissue and large round cells in between the tubules. Some of the cysts were lined with stratified epithelium with sebaceous glands, others with columnar epithelium and villi. Cartilage, striped and unstriped muscular tissue, and lymphoid tissue were also seen in the section. The tumour, therefore, was derived from all three layers of the embryo and was a teratoma.—Dr. E. Cautley showed a large Abdominal Tumour in a boy, aged three years. It was probably a congenital hydronephrosis.—Dr. J. Porter Parkinson showed a case of Cerebral Tumour in a girl, aged seven years. There was a history of occasional convulsions for 18 months. Two months ago weakness of the right side of the face and the right limbs was noticed. Recently there had been headache and vomiting. There was double optic neuritis. In one fit which was observed the movements were chiefly of the right limbs. Dr. Parkinson considered that there was a subcortical tumour in the left hemisphere, probably gliomatous in nature, and proposed to have the child trephined with the object of preserving the sight.—Mr. G. Pernet exhibited a case of Multiple Lupus Vulgaris in a boy, aged ten years. The patches, which were on the chin and right shin, followed an attack of measles. They had much improved during three months' treatment by the x rays preceded by scraping.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.—A meeting of this society was held on March 11th, Dr. J. Lindsay Steven, the President, being in the chair.—Professor Ralph Stockman and Professor Robert Muir described a case of Lymphadenoma, with involvement of the liver and spleen, occurring in a boy, aged 14 years, who had suffered from an enlargement of various glands over a period of eight years. Enlarged glands were removed from the left side of his neck in the Glasgow Royal Infirmary seven years ago. Further enlargement took place on the same side two years later but disappeared under treatment in the Edinburgh Royal Infirmary. A year later they again became swollen and were removed at the Sick Children's Hospital, Aberdeen. Since then the remaining cervical glands had become enlarged and these had been followed by enlargement of glands in other parts of the body. At the end of September, 1906, the abdomen became very prominent and a large hard swelling appeared on the left side and cough and night sweats became troublesome. On admission to the Western Infirmary, Glasgow, in December, extreme emaciation, profound anæmia, and a general enlargement of the lymphatic glands were noted. The spleen was greatly enlarged and the liver also showed enlargement. Ascites was well marked and there was œdema of the scrotum and lower limbs. Examination of the blood showed polymorphonuclear leucocytosis and a considerable diminution in the percentage of the hæmoglobin. The patient's temperature was very variable, with evening exacerbations; his weight and strength diminished, pleural effusion and jaundice developed, and death took place on Jan. 22nd, 1907. The necropsy showed general glandular enlargement. The abdominal lymphatic glands formed a large mass and were continuous with those in the groin; enlarged glands were also present in the portal fissure. The spleen weighed nearly two pounds and distributed through it were small pale

nodules. The liver was also much altered in appearance by diffuse infiltration and a similar condition was present in the lungs. The bone marrow showed a slight hyperplasia. The microscopic appearances of the lymphatic glands showed a proliferation of the endothelial cells and of the connective tissue stroma with disappearance of the lymphoid cells from the older foci and subsequent sclerosis.

PATHOLOGICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on March 13th, Dr. A. Hill Griffith being in the chair.—Mr. J. E. Platt and Dr. E. B. Leech showed microscopic slides to illustrate the Difficulty of Diagnosis of Breast Tumours. The left breast and a large axillary gland of a woman, aged 35 years, were removed for supposed carcinoma. Microscopical examination showed that the tumour in the breast was due to chronic mastitis while the axillary tumour was a fibro-adenoma and must have occurred either in an aberrant lobule or as a supernumerary breast.—Dr. J. de Ville Mather read a communication on the Pathology of Carcinoma of the Cervix Uteri. In some 47 cases of malignant disease of the cervix treated by vaginal hysterectomy the microscopical examination showed squamous epitheliomata in 37, glandular cancer in six, and sarcoma in four. Referring to sarcoma of the cervix in more detail Dr. Mather showed one case of angeio-sarcoma and another case where the growth was a mixture of round-celled sarcoma and squamous epithelioma. He did not consider sarcoma of the cervix to be as rare as was generally supposed.—Dr. John Cameron showed an Adult Brain with Complete Absence of the Corpus Callosum.—Dr. C. P. Lapage showed a specimen of Congenital Malformation of the Heart from a child aged two and a half years. The organ was twice the normal weight owing to hypertrophy of the right side. The walls of the right ventricle were thicker than those of the left and both ventricles communicated freely with the aorta owing to a deficiency of the interventricular septum. The aortic valves were normal. The ductus arteriosus supplied the lungs by the right and left pulmonary arteries. The auricles communicated by a small opening.

HARVEIAN SOCIETY OF LONDON.—A meeting of this society was held on March 7th, Dr. Sidney Phillips being in the chair.—A discussion was opened by Mr. W. Watson Cheyne on the Diagnosis and Treatment of Fractures in the Neighbourhood of Joints; he advocated reducing such fractures under an x ray screen. Skiagrams must also be taken so that the position of the bones after reduction could be known. If the bones were not in good position a second attempt must be made to reduce the fracture, and if after this the displacement had not been remedied, unless there was some marked contra-indication, open operation must be resorted to, and he advised the employment of screws or pegs.—Mr. Edmund Owen insisted on the importance of an anæsthetic being given for the purpose of arriving at a diagnosis in cases where there was any doubt or difficulty.—Mr. A. Pearce Gould contended that in the diagnosis of a fracture near a joint the best time for making a correct diagnosis was immediately after the injury.—Mr. W. Arbuthnot Lane described the different operative procedures necessary in fractures near joints and produced numerous skiagrams illustrating many kinds of such fractures showing the position of the bones before and after operation, the bones being kept in place by wires, screws, plates, and staples or combinations of these.—Mr. Robert Jones of Liverpool described his method of treating fractures of the ankle-joint in children.—Mr. Watson Cheyne replied after some remarks from Mr. W. H. Clayton-Greene and Mr. T. Crisp English.

Reviews and Notices of Books.

The Puerperium, or the Management of the Lying-in Woman and New-born Infant. By C. NEPEAN LONGRIDGE, M.D., Ch.B. Vict., F.R.C.S. Eng., M.R.C.P. Lond. London: Adlard and Son. 1906. Pp. 272. Price 5*s*.

As the author remarks in his preface, the details of the treatment of the puerperal period are often inadequately taught in a general hospital and insufficiently described in the ordinary text-book on midwifery. His little work therefore supplies a want and will, we are sure, be welcomed by those students and midwives for whom it is intended. It has the further advantage that it embodies the teaching current in these matters at Queen Charlotte's Hospital. In the section on post-partum hæmorrhage the author states that he has determined the coagulation time of the blood in ten women a few hours after they were delivered and found that there was no appreciable shortening of this period. This result is in accordance with the most recent investigations on the changes to be found in the blood during pregnancy. On p. 12 we find the statement that chloroform up to a certain point predisposes to uterine inertia. This is not a very exact statement. Pinard and others have shown that chloroform tends to interfere with the retraction of the uterus rather than with the contractions but it must always be borne in mind that the condition for which the chloroform is given really may be the cause of the inertia. In the description of the third stage of labour Dr. Longridge is in error in saying that the swelling above the pubes is due to the placenta lying in the vagina; it is due to the placenta lying partly in the lower uterine segment and partly in the upper part of the vagina, as can be readily ascertained by making a vaginal examination at this stage of labour.

In discussing the question whether the hand should be introduced into the uterus to extract a piece of membrane attention should have been drawn to the fact that while a piece of chorion readily breaks up and comes away this is not so with pieces of amnion which should always be removed. The statement that lacerations of the perineum occur more frequently in forceps deliveries we are not inclined to agree with: it is not our experience, nor was it that of a predecessor of Dr. Longridge, Dr. George Porter Mathew, who in a pamphlet entitled "Clinical Observations on 2000 Cases of Labour" stated that in his practice at Queen Charlotte's and other hospitals by the use of axis-traction forceps he had delivered 21 primiparæ without a single tear of the perineum. We agree with him in thinking that the use of axis-traction forceps more often prevents a tear than produces one. In the treatment of complete tears of the perineum no mention is made of the method of postponing the operation if necessary so as to have the advantage of proper assistance and a good light; such postponement can last for 12 hours without any fear of interfering with the primary union of the parts. We much doubt the wisdom of recommending catgut for the rectal stitches, even if introduced in the manner described.

In stating that the blood pressure shows a decided fall after delivery Dr. Longridge should have added that this fall only lasts for the first four or five days of the puerperium. A word of caution is necessary in advising the administration of urotropine in cases of cystitis. A dose as large as ten grains three times a day is often accompanied by the appearance of albumin in the urine; from five to seven grains is quite a large enough dose. We entirely disagree with the advice that a ring pessary should be put in if on the final examination on the patient getting out of bed the uterus is found displaced. The introduction of a ring pessary into the vagina before involution is complete is, in our opinion, very bad practice and almost certainly produces subinvolution of that canal. If a pessary is put in at all it should certainly be a Hodge but even this, we think, is better avoided. We are surprised to find that in the practice of the hospital to which this book mainly refers vaseline immersed in 1 in 1000 perchloride of mercury is used as a lubricant and it is apparently not the practice to wear gloves when the hand is introduced into the uterus. The book is good so far as details of treatment and the description of the simpler affections of the puerperium are concerned but the account of puerperal parametritis is poor and should either be left out or entirely rewritten in another edition. From the description given it would be impossible for the student to recognise a typical case with a swelling above Poupart's

ligament, and it is certainly not true to say that from the practical clinical aspect pelvic peritonitis and cellulitis should be described together, if the author is really alluding to a typical case of the latter disease.

As a guide to the treatment of the normal puerperium the book is a good one but when the author discusses other matters he is not so trustworthy.

Medical Diagnosis: A Manual of Clinical Methods for Practitioners and Students. By J. J. GRAHAM BROWN, M.D. Edin., F.R.C.P. Edin., F.R.S. Edin., Assistant Physician, Royal Infirmary of Edinburgh; and W. T. RITCHIE, M.D. Edin., F.R.C.P. Edin., F.R.S. Edin., Clinical Assistant Pathologist, Royal Infirmary of Edinburgh. Fifth edition, greatly enlarged and revised to date, with 200 illustrations and eight full-page plates. Edinburgh and London: William Green and Sons. 1906. Pp. xvi.–508. Price 8*s.* net.

THE importance of a knowledge of clinical methods is demonstrated by the increasing attention devoted to them in the medical curriculum, and by the appearance of numerous text-books and manuals dealing with what is frequently denoted as clinical research. The important advances which have within recent years been made in the methods for the microscopical examination of the blood, for the study of the various body fluids and excreta, and for their chemical investigation render it essential that any book on the subject shall be kept approximately up to date. In the book before us, which has now reached its fifth edition, an intelligible and practical account of many of the recent methods of investigation has been included, which justifies the authors' claims to have brought the book in line with present knowledge.

After an introductory chapter on the general aspect, condition, and circumstances of a patient, the various systems of the body are separately considered. In connexion with each the ordinary routine investigation is given, including that of the ordinary symptoms and subjective phenomena. The various physical signs are then described and their demonstration by the methods of inspection, palpation, percussion, auscultation, and mensuration is indicated in so far as they are applicable. As a rule the descriptions of these physical signs are clear and are written in such terms as easily to be understood; in each case the indications are given, their diagnostic value is stated, and their limitations or fallacies are exposed. Further, in each section any special methods employed are described, such as instrumental or graphic records and the chemical and bacteriological investigation of fluids or excreta associated with that system. Among these special chapters we may mention that on the examination of the gastric contents in which the methods employed for the study of test meals are given and the value of the information derived therefrom is discussed, while the means for the investigation of vomit and fæces are added.

The chapter on the investigation of the blood is worthy of special commendation, for within a comparatively short compass a great deal of valuable practical information is compressed; it is, moreover, liberally illustrated both with diagrams and coloured plates. The numerous varieties of normal and abnormal blood corpuscles are very clearly described and portrayed. The descriptions of methods of preparing and staining films for differential blood counts and for demonstrating parasites are succinct and practical. A short illustrated paragraph is added on the cryoscopy of the blood and an account is given of the method of working with Zikel's cryoscope which is sufficient to enable that instrument to be used. The account of the spectroscopic investigation of some of the derivatives of the blood pigment might with advantage have been a little more detailed in view of their importance.

In the section dealing with the circulatory system the description given of graphic clinical methods is good and we are glad to see that the excellent work of Dr. J. Mackenzie of Burnley is recognised and his apparatus described. The diagrams of pulse tracings and of the various forms of irregularity of the pulse are good and the phenomena of heart block and extra systole are discussed.

In the investigation of the respiratory system an apparatus, the perigraph, devised by one of the authors, appears to give more accurately information usually obtained by the cyrtometer. The routine methods of urinary investigation are described in detail and the various crystals, deposits, and parasites found in the urine are figured.

In connexion with the nervous system, the elucidation of its various functions and their derangement is worked out in detail and much of the newer work on these subjects is incorporated, including Dr. H. Head's views on deep, protopathic, and epicritic sensibility. In the chapter dealing with the visual functions the space devoted to a consideration of colour vision is hardly commensurate with its importance. The last two chapters are devoted to clinical bacteriology and cyto-diagnosis and are among the best in the book. The former includes accounts of the more common pathogenic organisms and their separation from the body and also of the investigation of the agglutinating and opsonic reactions. The chapter on cyto-diagnosis affords a useful summary of the more important facts at present known.

The book as a whole is eminently practical and one which we can cordially recommend to the student in the wards and to the practitioner who wishes to keep abreast of the modern advances in diagnostic methods.

Prevalent Diseases of the Eye: a Reference Handbook, especially adapted to the Needs of the General Practitioner and the Medical Student. By SAMUEL THEOBALD, M.D., Clinical Professor of Ophthalmology and Otology in the Johns Hopkins University, &c. With 219 illustrations and ten coloured plates. London and Philadelphia: W. B. Saunders Company. 1906. Pp. 551. Price 19*s.* net.

Professor Theobald does not consider that the ordinary treatises upon diseases of the eye, though ostensibly written for the general practitioner and the medical student, are in reality suited to their needs. He thinks that a treatise designed to meet the requirements of general practitioners must take into account the fact that they are, as a rule, unskilled in the use of the ophthalmoscope and possess neither the experience nor the necessary paraphernalia to make trustworthy tests of refractive errors, of muscular anomalies, or of visual fields. We find ourselves largely in agreement with the remarks contained in the author's preface. We think that the average medical student should confine himself to the study and diagnosis of the commoner ailments affecting the eyes, paying special attention to the grouping of cases into those which he may consider himself justified in treating unaided and those which he should hand over to the ophthalmic surgeon. Amongst the latter we include the correction of errors of refraction and muscular balance which cannot be mastered by the *average* medical student in the time and with the opportunities at his disposal. We do not think, however, that any one book can be devised which will satisfactorily meet the requirements of the medical student and of the practitioner whose education in ophthalmology has been neglected. Whilst the medical student should not consider himself qualified to correct refractions or to do ophthalmic operations, he ought to possess a sound knowledge of the principles which guide the skilled ophthalmologist and of the technique which he employs. A book written for the general practitioner who is unskilled in the use of the ophthalmoscope must of necessity be an unsatisfactory production both to the author and to the reader.

In so far as Professor Theobald has carried out his scheme he has produced an emasculated text-book but fortunately for the value of his work he has not adhered very strictly to

the principles laid down in his preface. Hence we find that more than a quarter of the text is devoted to diseases of the choroid, retina, and optic nerve, with their ophthalmoscopic features, to anomalies of refraction and accommodation, and to muscular anomalies. The work is, indeed, a fairly satisfactory text-book of diseases of the eye, marred, rather than improved, by the limitations set upon himself by the author. Detailed investigation of the material reveals many statements with which it is impossible to agree but a large proportion of these are the expression of the author's individual opinion. This is notably the case in dealing with lacrymal obstruction, where the use of giant probes is strongly advocated. It is not to be expected that a pioneer in this mode of treatment would forego advocating his method, though to those who are accustomed to other methods he condemns it by stating that "the treatment frequently extends over a period of eight or ten months, but the active treatment, involving the frequent probings, is comprised within as many weeks."

Without desiring to detract from the general utility of the book we may point out a few statements which appear to us to be inaccurate or to require modification. Stress is laid upon the importance of distinguishing phlyctenular from catarrhal conjunctivitis, because the treatment for the latter is deleterious in the former. Considering that the two conditions are combined in the great majority of hospital cases the advice loses its point; moreover, we do not agree that atropine is indicated in phlyctenular conjunctivitis when the cornea is not involved. We do not agree that care should be taken not to perforate the cornea in cauterising for conical cornea; in our experience the operation fails unless the cornea is perforated, though, of course, the dangers of the treatment are much increased. "Serous" iritis is said to be rarely a binocular affection, and sympathetic ophthalmia an occasional result of neglected iritis. In discussing the maturity of senile cataract no mention is made of the iris shadow; the advice is given to operate on mature unilateral cataract, and Förster's method of artificial maturation is advocated.

The author's knowledge of the pathology of ocular diseases appears to be faulty. He wisely avoids making more reference to this aspect of the subject than is absolutely necessary. As is often the case in such circumstances, he shows a marked penchant for doubtful theories. Insufficiency of the internal recti is regarded as an important factor in the causation of pterygium. Iritis, cyclitis, and so on, are attributed to "an influence transmitted through sympathetic or 'trophic' nerves, which is frequently reflex in character and is probably dependent upon structural changes in grey nerve matter, either in the cerebral ganglia themselves or in the ganglia connected with the fifth nerve, or both," undue importance being attached to hypothetical lesions of the ophthalmic ganglion. Detachment of the retina, which is one of the most obscure problems of pathology, is regarded as requiring no "elaborate and far-fetched theories" for its explanation. Errors of refraction and muscular anomalies are looked upon as important factors in the etiology of cataract, glaucoma, choroido-retinitis, and so on.

The book is well printed. The illustrations are numerous; they are mostly borrowed from well-known sources and many lose much by the absence of the colours used in the originals. There is an excellent index.

Sanitary Engineering with Respect to Water-Supply and Sewage Disposal. By LEVESON FRANCIS VERNON-HARCOURT, M.A., M.Inst.C.E. Longmans' Civil Engineering Series. 1907. Price 14s. net.

THIS is not only a useful book of reference for students but it is written in a form suitable for such non-technical readers as are interested in the subjects dealt with. The author gives a rapid though well-digested survey of the whole question. From the collection of the water at its original source it is followed through the several stages of storage, transit, filtration, and distribution, and afterwards during its removal, subsequent purification, and disposal—in fact, it is only lost sight of during the brief period of its passage through human or other organisms. The value of the book is increased by the full index and abundant illustrations. Certainly a good deal of detail might have been added which would have increased its value as a text-book, at the cost, however, of rendering it less acceptable to many readers.

The first section on water-supply occupies the major part of the volume; the several sources and the methods employed to utilise them are treated of much in the usual order—viz., rainfall, springs, deep and shallow wells, mountain streams, rivers and lakes. There is a chapter on well-boring, illustrating the tools used for the purpose, which is interesting. Detailed descriptions are given of most of the large engineering works for impounding water in various parts of the world and the known defects and advantages of their construction are discussed. The descriptions given of such works existing in our own country, together with the geological sections and maps of rainfall, should prove useful to very many engaged in local sanitary work. One point very often lost sight of by authors of similar works is the possible pollution of long mains by the water passing through them. This is dealt with in the case of the 18¼ miles of main from Lake Vyrnwy to Oswestry for the supply of Liverpool.

In reading this book we are struck by the extreme simplicity in conception of many of these stupendous engineering works. Mr. Vernon-Harcourt tells us in the preface that the compilation of the book occupied his attention over a period of five years. This can well be understood; only those who have attempted a similar task, even in a small way, can appreciate the amount of trouble attending the production of such a work and in avoiding innumerable side issues in order to restrain it within moderate dimensions. Space forbids us to follow in detail the description of the various fittings, reservoirs, filter beds, mains, and meters.

In the section devoted to house fittings brevity is the predominant feature but in the short space allotted to them we notice that the following points are not in accordance with the present practice. The ventilating pipe to the trap in illustration of the sink (Fig. 204) should not have been omitted, neither is it desirable to have the gully fixed, as is shown, so close to the wall. The form of the Dip grease trap (Fig. 206) is a revival of one long since discarded owing to the accumulation of grease in the corners which renders it very objectionable. Again, the addition of a syphon trap on the outlet, in the absence of any air inlet between the two traps, would soon lead to trouble. The long neck to the rain-water gully at the upper end of the drain (Fig. 210) is also not a thing to imitate. A quicker fall than is shown at Fig 212 to the bottom channel of the intercepting chamber greatly helps to clear the syphon trap and to prevent stoppage. The water seal as shown to the syphon is very insufficient. With regard to refuse destructors, though these have proved a boon to our big cities and large towns, it may be open to question whether they are not unnecessary and wasteful in rural districts. In describing certain sewers in Paris, the author says "they are sufficiently commodious to accommodate gas and water pipes suspended on side brackets near the top, or in case of large water conduits on slender columns." This is indeed making extremes meet; a little less of the *entente cordiale* in the matter of sewage and drinking water seems desirable. The frequent repairs and alterations necessary to these pipes cannot be carried out with the minimum risk of contamination possible amidst more favourable surroundings. The

description of the outfall sewers at Barking and Crossness into which the sewage has to be lifted by pumping suggests the awful condition into which London would be thrown in the event of a hostile fleet ever succeeding in entering the Thames and demolishing the pumping stations. The descriptions of the various systems of sewage disposal are on the well-known lines familiar to most of our readers.

The book is, in the main, an excellent one considered as an epitome of some of the best that has been written on a large and difficult subject but the individuality of the author is rather lost in the editor; with a few exceptions we look in vain for new ideas or for practice discussed from a fresh standpoint. We can, however, strongly recommend the book to medical officers of health as placing the whole subject before them in a concise form.

Nasal Sinus Surgery, with Operations on Nose and Throat. By BEAMAN DOUGLASS, M.D., Professor of Diseases of the Nose and Throat in the New York Post-Graduate Medical School and Hospital. Illustrated with 68 full-page half-tone and coloured plates, including nearly 100 figures. Philadelphia: F. A. Davis Company. 1906. Royal octavo, pp. 256. Bound in extra cloth, price $2 50 net.

THE first chapter of this work is devoted to a general anatomical review of the nose. The second chapter is devoted largely to the surgery of the frontal sinus. The operations on the frontal sinus itself are very briefly described and would be hardly sufficiently explicit for the novice. The third chapter deals with the ethmoidal sinuses. In this chapter the excellent work of Lack obtains no recognition and we may recommend Dr. Douglass to include a description of it in his next edition. Descriptions of the operations on the antrum follow next and here, again, we may remark upon the absence of any description of the more complete operative procedures on its inner wall. A description of the sphenoidal sinus and its surgery completes the work on the sinuses. The sixth chapter deals with deflections of the nasal septum, operations for nasal deformities, and the injection of paraffin. We note that the submucous resection, which is described in what might be termed a casual manner, gives little indication of the difficulties so frequently met with, nor any description of the necessary instruments, particularly Barrenger's resection knife. In the description of the operative methods any reference to the more recent methods of cold paraffin injection is omitted. We are informed on page 224 that in England the operation of removal of the posterior ends of the turbinates is performed by means of a spokeshave instrument or a sharp ringed curette and that this method is mentioned only to be condemned. We quite agree with the condemnation but are glad to say that, to the best of our knowledge, such an operation is not performed in England. The final chapter briefly describes laryngeal and tracheal operations.

LIBRARY TABLE.

A Health Reader. By C. E. SHELLY, M.D. Cantab., Consulting Medical Officer, Haileybury College, and E. STENHOUSE, B Sc., Associate of the Royal College of Science. Book I. London: Macmillan and Co. 1906. Pp. 160. Price 1*s.*—From this little book young people may learn the chief facts about the human body and the uses of the different parts of it. As the authors write, much of the pain and trouble in the world could be prevented if people would only learn how to treat their bodies properly. The book is divided into 30 lessons; the subject matter of each is well arranged and simply expressed. The final chapter deals with "Good and Bad Habits." It is just as easy to form good habits as it is to form bad ones. The collaborators not only draw attention to bad habits which harm or annoy others but to the kind of bad habit which does no one else any harm but still prevents a child from becoming strong and healthy. Habits of this kind are smoking, breathing through the open mouth, stooping over books or work, and slouching when walking or standing. The authors state that "carelessness in talking leads to the shameful habit of telling lies, and it weakens the brain." The little book, which is illustrated, is what it pretends to be and can only do good to those who read it.

Cancer: Its Treatment by Modern Methods. Being the Bradshaw Lecture for 1906. By EDMUND OWEN, Senior Vice-President of the Royal College of Surgeons of England. London: Baillière, Tindall, and Cox. 1907. Pp. 31. Price 1*s.*—Mr. Owen has published this lecture because it puts the case in a straightforward way, which is much needed at present. He reminds us that the treatment of cancer "is unfortunately not the same thing as cure, and that the most effectual treatment for cancer, no matter how small it may be, is still removal by the knife." We published the lecture in full so that our readers know Mr. Owen's views, which are practical but not final. One fact of importance obtained in the research laboratories in the course of inoculation experiments upon mice is that, every now and then, a mouse which has been infected with cancer triumphs over the disease and at last gets entirely free from it. The same thing sometimes occurs in the human subject but too rarely to form a ground for expecting such a result in any case or group of cases. Mr. Owen feels sure that the ultimate victory over cancer will not be solely by the knife. But whatever the great curative method may eventually prove to be the knife will, in all probability, still be needed for the removal of the primary lesion. The lecture is most interesting and will, no doubt, be widely read.

Die Topographie des Lymphgefässapparates des Kopfes und des Halses in ihrer Bedeutung für die Chirurgie. (The Topography of the Lymphatic Apparatus of the Head and Neck in its Relation to Surgery.) By Dr. AUGUST MOST, Breslau. With 11 plates. Berlin: August Hirschwald. 1906. Pp. 133. Price 9 marks.—Dr. Most's book forms a useful addition to the literature of the lymphatic system in man. The recent publication of several works on this subject affords some indication of the increasing attention which is being paid to this department of human anatomy, chiefly owing to the demands of surgery. Of the more recent works, Mr. Cecil H. Leaf's translation of Professor Poirier's masterly treatise is perhaps the best known to English readers. So far as pure anatomy is concerned, Dr. Most follows the usual lines, describing first the general arrangement of the lymph glands of the head and neck, and in succeeding chapters considering the lymphatics of the integuments and superficial structures, of the salivary glands, and of the various mucous surfaces. The clinical and operative bearings of the subject receive a due share of the author's attention and in this respect the book ranks rather with applied than with purely descriptive anatomy. There are 11 plates as well as two figures in the text. The lymphatic vessels are depicted as they appear in young subjects and the illustrations convey a clear idea of the course of the lymphatics from the eyelids, lips, nasal fossæ, auricles, and other parts.

The Proceedings of the Anatomical and Anthropological Society of the University of Aberdeen for 1904–05. Aberdeen University Press, Limited.—These Proceedings are full of interest. From a purely anatomical point of view a record of an investigation of the Mode of Development of the Lower Jaw in Man will well repay perusal. Dr. Alexander Low, who carried out the research, concludes that each half of the mandible is developed in membrane as a single skeletal element—the dentary—and

that the so-called splenial element is simply an extension of this. He also states that Meckel's cartilage becomes ossified and incorporated only with that part of the lower jaw which is below and inside the mesial and lateral incisor teeth. Accessory cartilaginous nuclei appear for the condylar and coronoid processes, but not, in man, for the angle. Professor R. W. Reid, the President of the society, contributes some Notes on a Mesial Sagittal Section of a Female Subject. In the section the spinal cord is compressed antero-posteriorly and laterally by a mass of gliomatous tissue which extends throughout the whole length of the spinal canal, is attached to the pia mater, and is invested by the dura mater. Professor Reid suggests that this may be an attempt at duplication of the cord but remarks that it also resembles certain cases which are described as diffuse sarcoma of the pia mater. The Proceedings contain a large amount of anthropological material. Papers are contributed by Mr. D. Horn, B.A., of Queensland on the People of the New Hebrides; by Mr. F. S. Maxwell of Sierra Leone on Hausaland and its Inhabitants; by Mr. George Moir, M.R.C.V.S., on the Natives of the Malay Peninsula; and by Captain A. W. Cook Young, I.M.S., on Tibet. In an interesting description of Four Short Cists from Aberdeenshire Dr. Low remarks that they furnish evidence of burial by inhumation as well as by incineration, the former being the earlier practice. He also corroborates Dr. T. H. Bryce's view that the beaker class of sepulchral urn, which is the oldest Bronze Age ceramic, is associated with a specific cranial type. We commend a paper by Mr. F. G. Parsons on the Anatomical Education of the Medical Student to the attention of all teachers of anatomy.

New Inventions.

MOUSTACHE CLIPS FOR LARYNGOSCOPY.

A PAIR of small spring forceps, such as are sold for the purpose of raising the ends of the moustache, are very useful for temporarily keeping up an overhanging moustache during an examination of the pharynx, larynx, or naso-pharynx. They must be applied horizontally, just on either side of the median line, with the fluted blade below and the handles

directed outwards as shown in the accompanying figure. They may be obtained of Messrs. Mayer and Meltzer, 71, Great Portland-street, London, W.

Brook-street, W. E. CRESSWELL BABER.

IMPROVED MOUTH GAG.

WHILE doing operations on the mouth I have been struck by the inadequacy of the gags in use. All that I have seen are liable to slip into the mouth, particularly if there are teeth in the upper jaw and corresponding vacancies in the lower and *vice versâ*. To obviate this I have had a gag made which, as shown in the illustration, has two wide tooth-plates which fit firmly over either teeth or gum, as the case

may be, and when fixed in position by the screw it is, as far as my experience goes, impossible for it to slip into the mouth or even to move. The gag, which I have been using for nearly 18 months, was made for me by Messrs. White and Wright, 93, Renshaw-street, Liverpool. The plates measure 1¼ inches by ¾ inch and are covered with rubber.

H. LYLE, M.R.C.S. Eng.,
Senior Surgeon to the Cancer and Skin Hospital, Liverpool.

Liverpool.

THE USE OF ALCOHOLIC BEVERAGES.

WE have received the following document for publication in THE LANCET. As an expression of scientific opinion it deserves to be considered carefully by medical practitioners. The signatories are well-known members of the profession, and the importance of the questions involved, alike from the medical and the social point of view, can hardly be over-estimated.

"In view of the statements frequently made as to present medical opinion regarding alcohol and alcoholic beverages, we, the undersigned, think it desirable to issue the following short statement on the subject—a statement which we believe represents the opinions of the leading clinical teachers as well as of the great majority of medical practitioners.

"Recognising that, in prescribing alcohol, the requirements of the individual must be the governing rule, we are convinced of the correctness of the opinion so long and generally held, that in disease alcohol is a rapid and trustworthy restorative. In many cases it may be truly described as life-preserving, owing to its power to sustain cardiac and nervous energy, while protecting the wasting nitrogenous tissues.

"As an article of diet we hold that the universal belief of civilised mankind that the moderate use of alcoholic beverages is, for adults, usually beneficial, is amply justified.

"We deplore the evils arising from the abuse of alcoholic beverages. But it is obvious that there is nothing, however beneficial, which does not by excess become injurious."

T. MCCALL ANDERSON, M.D.,
Regius Professor of Medicine, University of Glasgow.
ALFRED G. BARRS.
WILLIAM H. BENNETT, K.C.V.O., F.R.C.S.
JAMES CRICHTON-BROWNE.
W. E. DIXON.
DYCE DUCKWORTH, M.D., LL.D.
THOMAS R. FRASER, M.D., F.R.S.
T. R. GLYNN.
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W. D. HALLIBURTON, M.D., LL.D., F.R.C.P., F.R.S.,
Professor of Physiology, King's College, London.
JONATHAN HUTCHINSON.
ROBERT HUTCHISON.
EDMUND OWEN, LL.D., F.R.C.S.
P. H. PYE-SMITH.
FRED. T. ROBERTS, M.D., B.Sc., F.R.C.P.
EDGCOMBE VENNING, F.R.C.S.

THE LANCET.

LONDON: SATURDAY, MARCH 30, 1907.

The Suggested Anthropometric Survey.

THE reply of Sir HENRY CAMPBELL-BANNERMAN to the deputation which waited upon him on March 5th in order to solicit a grant from public funds for the institution of a national anthropometric survey may be taken as a fair example of the habitual attitude of the professional politician towards any question which is merely of national concern and which does not admit of immediate manipulation in the interests of party. The deputation represented the Royal Anthropological Institute and the Royal Society of Edinburgh, the Royal Anthropological Society and the anthropometric committee of the British Association, the British Science Guild, and other bodies of analogous character, and the several speakers enlarged upon the absence of any trustworthy information concerning the physical condition of the population, either in detached areas or in the country generally, as well as upon the valuable assistance in many directions which such information would be calculated to afford. Sir HENRY CAMPBELL-BANNERMAN in his reply began by yielding a practical assent to all the arguments and statements of the deputation and then proceeded to say that "of course" they would not expect him to say "anything definite" on the part of the Government. They had "to carry public opinion with them" and for this purpose it was necessary "to proceed warily." He did not deny that the amount asked for—£4000 or £5000—was "a modest sum," but "a great many modest sums made up a large sum," and so forth *ad infinitum*. He committed the Government to nothing but a promise of "earnest and careful consideration" at some unspecified future time and may fairly be supposed to have dismissed the deputation in a spirit like that of the Irishman who accepted a bill at three months and threw down his pen with the observation, "Thank goodness, that's settled."

We greatly doubt whether the country generally will share in the Prime Minister's cheerful optimism about the question which he has so pleasantly sought to shelve, or whether they will agree with him in the opinion that any great amount of "wariness" is required as an antecedent to the weighing and measuring of school children. To be "wary" in such an undertaking would be like drinking tea by stratagem. The project, calmly regarded, does not appear to be of a revolutionary character. However effectively carried out, it would not deprive a single "poor man" of his "beer," and it would hardly induce any large proportion of mothers to seek martyrdom within the classic walls of what was once described, in a German newspaper, as "a town near London, famous for its pills." Most parents, at all events among educated people, measure their children as it is, if only at uncertain periods and in no very accurate manner; and these, at least, could have no objection to the same thing being done more completely at school. The question whether our population, as a whole, is preserving or losing its physical strength and vigour is not only, as Sir HENRY CAMPBELL-BANNERMAN admitted, "important," but it is of more real and vital importance than almost any other which can be proposed. Upon the answer to it may depend the future of the Empire and unless we now work out that answer for ourselves it may be furnished by events at a time when those events will have passed beyond our control. History repeats itself; and that which has been shall be. The predominance of Rome during four centuries reduced the natives of Britain to a state of military weakness and unpreparedness; and the withdrawal of the legions by HONORIUS left the country an easy prey to Danish and Teutonic invaders. In course of time the self-indulgent habits of the Saxon conquerors were the main causes of their overthrow by the hardy and abstemious Normans; and we, if we would escape the fate which has twice befallen our ancestors, must be careful to see that we do not invite it by allowing its causes to operate unchecked. It is very possible that the alarm which has recently been felt and expressed concerning the alleged physical degeneracy of our people may be in excess of the facts; but, in the presence of such an alarm, no Englishman should allow his vigilance to slumber until the facts have been ascertained. It is at least certain that the conditions of life among us have of late years undergone considerable changes, most of them in directions not calculated to make for physical endurance, and that neither the extent nor the influence of these changes has become the subject of any systematic or trustworthy investigation. Our labouring population has been largely withdrawn from rural into urban districts, our staple industries, more and more assisted by machinery, are less and less calculated to develop muscular strength and activity in a large proportion of those who follow them, and the habits of our people in respect of food have undergone great and possibly far-reaching changes. The consumption of fresh meat has increased enormously and forms of food much used and valued by our ancestors have been largely superseded by compounds prepared in factories and chiefly recommended to purchasers by the assertion that no trouble or skill is required in order to prepare them for the table. In respect of food, perhaps more than in any other direction, the net of the advertiser has been thrown over the poor and the ignorant, and commercial profit has been sought without regard to the deterioration of race by which it may possibly be attended.

In the face of such changes, and of our ignorance of their actual or possible effects, surely nothing can be so important as to ascertain, as quickly and as certainly as possible, what is the goal to which they tend. Is it true that, as has been said, "the small young woman and the small young man" are increasingly evident as factors in our urban populations? Is it true that our children are growing up increasingly defective in height, in chest capacity, in muscular development, and in physical endurance? We cannot tell, because

we have no data for comparison, no means of correctly estimating either the strength or the weakness of former generations. The evidence, in so far as it exists, is not wholly unfavourable, for the operation of the laws collectively known as the Factory Acts has tended greatly to improve the conditions of work and of life among large classes of operatives, more especially with regard to children. An important factor in the agitation by which the Factory Acts were produced was the publication, in 1840, of Mrs. TROLLOPE'S novel, "Michael Armstrong, or the Factory Boy," which was abundantly illustrated by pictures showing the condition of factory "apprentices" at the time, pictures for which it would be difficult or impossible to find any living parallels in our own day, but which, when they appeared, were not accused of inaccuracy or exaggeration. It must be remembered, on the other hand, that the manufacturing population of that time bore a much smaller proportion to the total population than at present and that comparatively few of the "apprentices" would be likely to survive to maturity. Their condition, moreover, was flagrant and unmistakeable, whereas what we have now to dread is an insidious and general decline of strength and activity, rather than the crushing out of a small section of workers by evils of an overwhelming character. In order duly to protect ourselves and our descendants against possible and by no means problematical evils, we want to know what is the average physical standard of the country at successive years of life, and how far this standard is departed from in different localities, among different classes, and by the children of persons engaged in different occupations. We want to know how far it is departed from in the numerous rural districts intended by nature to be healthy but in which local "authorities" ordain that the causes of disease shall prevail unchecked. We want to compare the children of ten years old, in places of excessive infantile mortality, with those of the same age in places where the infantile mortality is kept within due bounds, in order that we may know to what extent the conditions which destroy infant life serve also to impair the health of the survivors. These questions are not only important, as admitted by the Prime Minister, but they are vital. Upon the accuracy of the replies given to them may depend the future of the Empire and, when compared to them, politicians and party leaders are of no more account than the dry leaves of autumn. When the strong man armed keepeth his house his goods are at peace; and strength is the only secure foundation of dominion.

The Clinical Significance of Iodophilia.

A PATHOLOGICAL and clinical study of the iodine reaction of the leucocytes affords the basis of an interesting and important paper by Dr. JOHN C. DA COSTA, jun., published in the *Proceedings of the Pathological Society of Philadelphia*, N.S., Vol. IX., p. 113, 1906. Since EHRLICH described the reaction in 1883 numerous observations have been made, yielding results which in many of the details are so conflicting as to render the test one rather of interest to the scientific hæmatologist than of value to the clinician. Dr. DA COSTA'S paper is especially noteworthy and important, not only from the fact that he has examined and correlated the work of previous investigators, but also from the careful critical study which he has made of his own results in the light of their observations. His summary of the general results of previous workers is "that the iodine reaction occurs with great constancy in conditions of toxæmia both bacterial and non-bacterial; that it signifies a lowered vitality of the iodophilous cells, and that its exact nature is not definitely understood. Of bacterial toxæmias productive of iodophilia, such conditions as pyogenic abscess, general sepsis, and many of the specific febrile infections are the underlying factors; while iodophilia, excited by non-bacterial or chemical toxæmia, may develop, for example, in diabetes mellitus, in leukæmia, in dyspnœa, in acetanilid poisoning, after ether narcosis, and perhaps in high-grade anæmias."

The nature of the iodophilous reaction may be briefly stated to be a peculiar susceptibility of the protoplasm of the leucocytes, notably the polymorphonuclear variety in certain abnormal conditions, to the action of iodine applied to the dried film which stains it a variable shade of brown, whereas the protoplasm of normal leucocytes in dried films assumes a pale lemon-yellow tint only. It is important, however, to note that a fresh *moist* film of normal blood exposed to iodine vapour before drying occurs shows the brown staining in a manner precisely similar to that in *dried* films of abnormal blood, which as suggested by WOLFF indicates that the iodophilous substance, presumably glycogen, is normally present in the circulating leucocytes of healthy blood, but in the drying of the film it is altered so as to be no longer demonstrable by iodine. Two theories have been propounded to explain these facts, the first that of WOLFF, which supposes that in the iodophilous leucocytes of disease the glycogen, normally so soluble that it is unaffected by iodine, has become abnormally insoluble by the action of some toxic influence and hence retains the power of staining with iodine in the dried film. The second theory brought forward by SOROCHOWITSCH explains the reaction by supposing that normally the glycogen is rapidly converted into glucose by a ferment the action of which is hindered in toxic conditions, so that an accumulation of glycogen occurs in the protoplasm.

Dr. DA COSTA'S observations were made upon 100 patients suffering from various acute infections and chronic disorders by examining films for the iodine reaction, while in 50 of the cases hæmoglobin estimations and blood counts, both absolute and differential, were also made. In 50 of the cases giving positive reactions the percentage of iodophiles and of the different cells showing the reaction were calculated. Similar observations on 20 healthy subjects for purposes of control gave uniformly negative results. In the 100 cases of disease a positive reaction was obtained in 64, in all of which it was possible to refer the cause to pyogenic sepsis or chemical toxæmia. 26 of the patients examined were suffering from enteric fever—of these nine showed iodophilia; most of these were cases of severe infection, complicated in two instances by pneumonia and in others by local peritonitis, by free intestinal hæmorrhage, and by general septicæmia. The reaction cannot be said to have

any specific diagnostic value in this disease, since it may obviously occur under many diverse conditions. In 30 cases of purulent and septic conditions, such as appendicular abscess and gangrene, pelvic abscess, empyema of the gall-bladder, hepatic abscess, purulent peritonitis, and general septicæmia, the reaction was positive in all, its intensity apparently depending rather upon the virulence of the pathogenic organism than upon its identity or upon the extent of the associated suppuration. Iodophilia was found in two cases of catarrhal inflammation of the appendix, as well as in all the cases of purulent and gangrenous appendicitis, so that it does not serve to distinguish between the catarrhal and suppurative forms of the disease. In croupous pneumonia the seven cases tested all gave positive results during the height of the febrile period of the disease, and in no other disease, not even in grave streptococcus septicæmia, was so marked a reaction observed. After the crisis the iodophilia rapidly begins to disappear and does so completely within 48 hours in uncomplicated cases but persists when delayed resolution, pulmonary abscess, or empyema follows the pneumonia. Four cases of gonorrhœal arthritis gave a positive reaction to the iodine test and the reaction was observed in cases of acute pneumonic phthisis, carcinoma, pernicious anæmia, myelogenous leukæmia, diabetes mellitus, and amyloid liver, while negative results were obtained in rheumatic fever, endometritis, cholelithiasis, biliary cirrhosis, malarial splenomegaly, ovarian cyst, rickets, and acetanilid poisoning. From a careful critical and statistical analysis of his results Dr. DA COSTA derives the following general conclusions. In the dry blood film intracellular iodophilia indicates a form of leucocyte degeneration of toxic origin, due presumably to an abnormal affinity of the cell glycogen for iodine, the same reaction in the wet fresh blood being physiological. Extracellular masses in the plasma staining with iodine have apparently no pathological significance. The toxic factor in the production of the reaction may be readily demonstrable, as in pyogenic septicæmia and pneumonia, or it may be indefinite, as in pernicious anæmia and in cachectic states. The reaction is found to be restricted to the cytoplasm of the leucocytes, never affecting the nuclei. In 98 per cent. of all reactions the polymorphonuclear neutrophile leucocytes are implicated; in about 20 per cent. other cells, notably the lymphocytes and less commonly the myelocytes, while it is only in exceptional instances that iodophilous eosinophiles are noted. The number of cells staining with iodine is found to correspond roughly with the colour intensity of the reaction, 50 per cent. or more of iodophiles being found in a decided, and about 25 per cent. in a feeble, reaction. Iodophilia apparently shows no definite relation to leucocytosis, to anæmia, or to pyrexia. Dr. DA COSTA concludes that from a clinical standpoint iodophilia is often a helpful, though in no circumstances a diagnostic, sign, and specifically states that in differentiating various clinical entities extreme caution must be exercised in accepting it as a criterion, although he has found it of value as corroborative evidence in distinguishing both gonorrhœal arthritis and osteomyelitis from rheumatic fever, pure tuberculosis from tuberculosis with secondary pyogenic invasion, and amyloid liver from fatty cirrhotic liver.

The Workmen's Compensation Act, 1906.[1]

IN THE LANCET of Jan. 26th we suggested that as the cost of a copy of the new Workmen's Compensation Act is but 4*d*. many of those most concerned would before long purchase and make themselves acquainted with its provisions. They may consider it with or without the assistance of a legal text-book and they will find their attention directed to the points of interest to medical men in the articles and letters which we have published. The questions which are likely to arise, but which are not provided for conclusively under the Act, can to some extent be predicted; but special prescience is hardly required in order to foretell that others will present themselves from time to time which have not been anticipated and with regard to which the interpretation of the law will be found to be doubtful. We note that the insurance companies are making full provision against this contingency for such as like to avail themselves of policies framed against all risks, and that those willing to incur the necessary cost can without any very large outlay protect themselves against the new liabilities now imposed upon them, as well as against those which existed before but which so seldom made themselves felt that insurance was not usually deemed necessary. Those possible instances also are not forgotten where the servant may become affected by a disablement not due to a cause for which his master or anyone else is liable, but for which a prudent and kind-hearted employer will often wish to provide if it is made easy for him to do so. The question of insurance is one for the serious consideration of all, but for medical men it is especially so because they are employers of persons whose risks are to some extent peculiar owing to the circumstances of the medical profession, and because also they are employers of persons whose work, dangerous or otherwise, like that of their masters, is carried on constantly without the limitation of regular hours of labour or of any fixed place of employment. The servant of the medical man, for instance, employed in keeping clean his surgery or his dispensary, is liable to accidents which may be rare but which differ from those occurring in other domestic service. The coachman of the lay employer has his hours of work which in some families imply night work, but which, as a rule, are of more or less fixed duration. The coachman of the medical man, particularly when his practice lies in a country district, never knows when his day's work will begin or end, and it takes him along rougher roads than that of the man who drives his master or his mistress merely for their pleasure.

We have before us a cheap but serviceable explanatory guide to the new Act, published by the *Daily Chronicle* at 1*d*., and we note some practical advice given on its last page in relation to insurance, where it recommends that care should be taken to see that the policy provides against every contingency possible in the master's service. It calls particular attention to extra servants casually employed and to the possible requirement in a policy of notice to the office of such

[1] See also THE LANCET, Oct. 13th, 1906, p. 1012; Nov. 10th, 1906, p. 1316; Dec. 8th, 1906, p. 1612; Jan. 12th, 1907, p. 112; Jan. 26th, 1907, p. 240.

employment before the insurance company will hold itself responsible. It also points out that the provisions of the policy as to change of servants are to be considered with care. We need only mention the locum-tenent, the assistant, and the nurse in order to show that the medical man is peculiarly liable to have in his employment persons with regard to whom a liability may possibly arise and may be disputed, whose employment may be temporary only, and whose salaries forming the basis upon which the employer's liability is calculated, are above the usual emoluments of the ordinary workman or domestic servant. It is with regard to the nurse again that questions may arise as to whether her employment is "casual," and also as to who may be her employer, and the same point will be mooted as to humbler workers whom the medical man, according to the exigencies of his profession and apart from his position as an ordinary citizen, may call in to perform various services. The accidents against which provision is to be made by insurance have hitherto not attracted much attention and are regarded as of infrequent occurrence, but we must wait until the privileges of the Act have been enjoyed for a few years before we are able to appreciate the effect of the compensation provided in increasing the occasions for seeking it. The schedule of the Act which lays down the scale and conditions of compensation contains more that is of special interest to the medical man in the exercise of his profession than does the body of the statute. We are already familiar with the claims of the workman against his master, all medical men having been brought into contact with such cases, but under the new Act every general practitioner will find himself now and again summoned either by the employer or the employed in the large class of domestic servants. Here accidents as a rule will not be serious and the medical man may frequently be reminded that "if the incapacity lasts less than two weeks no compensation shall be payable in respect of the first week," and we can foresee that where the period of incapacity has to be fixed according to the medical man's judgment he will often have a difficult task.

In various ways the medical profession finds itself expected to perform semi-judicial rather than healing functions under the new law, and we are confident that it will not fail to do so with honourable impartiality. The occasions may increase on which the medical man will be tempted "to take a side" involuntarily when forming and declaring his opinion, but the augmented powers of medical referees will bring disputed medical questions under the consideration of those qualified by their training to decide them. An instance of the medical referee's powers is contained in the fifteenth paragraph of the schedule referred to, which provides that "where no agreement can be come to between the employer and the workman as to whether or to what extent the incapacity of the workman is due to the accident, the provisions of this paragraph shall, subject to any regulations made by the Secretary of State, apply as if the question were a question as to the condition of the workman;" that is to say, this point, which in ordinary actions is regarded as one well within the competence of a judge or of a jury of laymen, is to be submitted to a medical referee whose certificate shall be conclusive upon the matter. It is to be hoped that before July 1st, when the Act will come into force, and when, so far as medical referees are concerned, it will apply to accidents occurring before that date, the rules of the Home Office for regulating the proceedings of medical referees will have been long enough before the medical profession to be studied carefully and for attention to be called to any points in which, as may easily occur upon such occasions, they may be defective and may require amendment.

Annotations.

"Ne quid nimis."

THE HOT CROSS BUN.

DIETETICALLY considered the hot cross bun differs in only one regard, but perhaps an important one, from bread, inasmuch as the Good Friday bun contains a fair sprinkling of spice, generally in the shape of allspice or pimento. Otherwise the ingredients are the same and the mode of preparation is the same—that is to say, a dough is prepared, yeast is added, and the "sponge" is then cut up into buns and baked. The hot cross bun, in a word, is practically bread plus a condiment. The rôle of spices and condiments in food is important. They improve appetite and increase the digestive power by inducing a flow of digestive juice. They are, as a rule, therefore, of service to those who, from illness or other cause, have a dull appetite. The use of a condiment may almost be regarded as superfluous in the case of persons with vigorous appetite and sound digestion, while spices and sauces must be studiously excluded from the diet of any who are suffering from catarrh of the stomach or intestine, since, after all, condiments are in reality irritants. The custom of eating hot cross buns on Good Friday, which is, of course, a day nearing the end of a fasting season, may be regarded as having for its object, perhaps, the preparation for the feast day, or else the intensification of the discipline which the partial abstinence from food entails. To sharpen the appetite during a period of fasting is clearly calculated to make the ordeal of self-denial more severe. The spices would aggravate the craving for more food. Whether this was the original idea of the spiced bun for eating on Good Friday may be open to question, but such a view at all events suggests itself when we come to consider the part played by spices in dietetics, and it is a significant fact that spices, as a rule, are rare constituents of buns.

RECORDS OF SMOKE.

THE deleterious effects of coal smoke escaping into the atmosphere have often been referred to in our columns and the discharge of black smoke from a chimney has been made a statutory offence. The prosecution of offenders is, however, not infrequently difficult on account of conflicts in the evidence as to the density of the smoke emitted. Writing on this subject in the Engineering Supplement of the *Times* of March 20th, Mr. James Swinburne points out that the excellent smoke chart of the Institution of Civil Engineers is imperfect, because it is almost impossible to compare smoke seen against the sky with a shade on paper which is not only in close proximity to other darker and lighter shades but is not really comparable at all. He says that this difficulty may be overcome by having the smoke scale made on glass or transparent celluloid which can be held up in such a way that the smoke can be compared with the progressive series of tints forming the scale. These scales might be standardised so that different observers might have exactly similar tints before them, and a further

improvement would be to photograph the smoke scale together with the smoke which is to be tested. They then both receive the same treatment and the smoke on one print is compared not with the smoke on another print but with its own smoke scale. Thus, smoke on one print may be very light, the scale being very light too, so that the smoke corresponds with the scale at, say, 0·4, which means that the smoke stops four-tenths, or 40 per cent., of the light. On another print, taken by someone else at the same time, the smoke may look very dark, but the scale will look very dark too, so that the smoke will still correspond with the part of the scale marked 0·4. Mr. Swinburne further describes how a smoke scale, with its varying tints, is prepared on a photographic plate and how different smoke scales can, for purposes of comparison, be calibrated in terms of their light-stopping power. He says that for photographing a column of smoke which is to be tested a pocket quarter-plate camera does quite well, its only drawback being that the shutter has only one speed, which will probably be too fast for smoke photography.

INFANTILE MORTALITY IN SCARBOROUGH.

IT is much to the credit of the town council of Scarborough that it has preserved careful records of the mortality occurring in that beautiful and fashionable seaside resort for each week of the last 30 years. The result is that the present medical officer of health, Dr. John Knight, has recently been able to present to the council an analysis of the infantile mortality there prevailing in each year from 1876 to 1905. Dr. Knight has brought to his task a marked degree of administrative knowledge. We have nothing but commendation for the telling way in which he has marshalled his data or for the straightforward manner in which he has ventured to point out to his authority the serious fact, for which it is alone responsible, that in spite of the great natural advantage of its seaside position Scarborough still suffers its infant population to die almost as rapidly as does the infant population of England and Wales generally, including, of course, the vast aggregate of industrial communities which possess none of the advantages conferred by proximity to the sea. The report is replete with tables and with well-constructed diagrams, and the accompanying letterpress furnishes an instructive commentary on the facts thus graphically represented. We note that the tables of infantile mortality are drawn up according to the new forms recently issued by the Local Government Board and are identical with the useful series of tables on infantile mortality contained in the last annual report of the Registrar-General. Dr. Knight directs attention to the fact that although in the last 30 years there has been a steady fall in the mortality of other sections of the community, the infantile death-rate has, nevertheless, remained almost stationary. The various causes for this up-keep of infantile mortality in Scarborough are ably discussed and its incidence is shown on the successive weeks and months of the first year of infant life. It is, however, to the "recommendations" made by Dr. Knight for the reduction of the present excessive mortality that we desire particularly to direct attention. After stating his conviction that the complex problem of infantile mortality admits of solution only by attacking it from all sides—every agency for the prevention of disease, the protection of feebleness, and the promotion of health being called into play—he shows that the waste of infant life stands in close relation to the social condition of the parents, being greatest here, as elsewhere, among the poorest classes of the community. Two obvious improvements are indicated in the report as specially necessary in Scarborough at the present time: (1) the systematic reduction in number and the ultimate abolition of the privy system; and (2) the more frequent removal and the more efficient disposal of house and street refuse. The pollution of the soil which is known to play an important part in the causation of infantile diarrhœa may be lessened by the prompt removal of excretal and other domestic refuse from amidst the homes of the people. Dr. Knight does not shrink from telling his authority plainly that both these measures are well within the competence of the corporation without seeking further powers from Parliament for that purpose. General measures, however, must be supplemented by action regarding the particular infant. And here it is obvious that before any procedure of this kind can be instituted the sanitary authority must become aware of the existence of the individual infant but in this respect the present law is defective. Not until the lapse of six weeks after the event need the birth of a child be registered, although one-third of the infantile deaths occur under the age of one month. As in these cases the birth and the death are registered at the same time, it follows that no control can at present be exercised over the lives of one-third of the infants dying within their first year. This defect in the law has been remedied in Huddersfield, and, we believe, in a few other towns, by a system of voluntary notification whereby intimation to the authorities of the occurrence of a birth is encouraged by the offer of a small fee for each notification within 48 hours of the event. This duplication, however, of methods for securing necessary information seems to us clumsy and unnecessary and we are glad to find, from the recent reports of the Registrar-General, that an amendment of the present arrangements for birth registration is now under his consideration. But the uselessness of even a prompt notification of births is clearly recognised by the Scarborough medical officer of health unless definite administrative action follows immediately on its receipt. Thus the minimum of such action would, in Dr. Knight's judgment, consist in the distribution to each person concerned of a card or leaflet containing hints on the feeding and rearing of infants. But as most of the waste of infant life depends on ignorance of parents the better plan would be the appointment of a lady health visitor, as in Manchester and some other towns, who would visit the mother and give directions for the welfare of her offspring and herself.

A NEW AIR PURIFIER.

WE have received particulars of a new air purifier which has been applied with conspicuous success to the refrigerating room of a large brewery at Newark-on-Trent. It is suggested to us by Mr. Ernest Ringrose, L.R.C.P. Lond., M.R.C.S. Eng., that this method is eminently fitted for use if not in the wards of hospitals at least in the operating theatres. The Warwick air purifier (as the apparatus is called) consists of a large box containing metal trays which are as wide as the box but not so deep, so that one tray can be pushed to the back, leaving a small space in front leading to the tray below. The next tray is placed forward, leaving the vacant space at the back, and so on through a series of trays which, acting as baffles, compel the air to flow over a relatively large surface. At the inlet there is a small skeleton drawer fitted with a sheet of muslin which screens coarse particles out of the air. The metal trays contain a layer of glycerine sprinkled with a little powdered sulphite (presumably) of sodium. The glycerine arrests the organisms and the sulphite prevents their development. Actual experiments showed that the purifier removed on an average 99·5 per cent. of the organisms present in the air admitted from the outside, the only organisms which eventually got through being moulds. Neither yeasts nor bacteria appeared even on prolonged exposure in the refrigerating room.

A photograph showing three bottles containing wort gelatin has been submitted to us. No. 1 was exposed to the outside air on the east side of the premises and No. 2 to the outside air on the west side of the premises. No. 3 was exposed in the refrigerator room. Growth took place freely in No. 1 and No. 2, but No. 3 is practically free from any development. This is very clearly seen in the photograph. The apparatus stands about four feet high and is about three feet square and in section and contains 11 trays. In the experiment just cited 20,000 cubic feet of air were passed through this apparatus per hour and apparently only one organism per 500 cubic feet of air escaped the joint action of the glycerine and sulphite in the tray. Mr. Ringrose suggests that this air purifier would prove a valuable accessory to every hospital, so that the benefits to mankind which have been brought about by the labours of Lord Lister may in this way be enhanced.

DEATH CERTIFICATION.

THE Lord Chancellor on Friday last received a joint deputation from the London County Council and the Medico-Legal Society which was introduced by Sir William J. Collins, M.P. Mr. H. T. Anstruther handed to the Lord Chancellor a report dealing with the necessity for obtaining the appointment of medical investigators who might make preliminary inquiries in cases where an inquest appeared desirable. Sir William Collins spoke upon the imperfections and the dangers of our present lax system of death certification and pointed out in how many cases the drawing up of a preliminary report in cases of suspected unnatural deaths was left to the unskilled coroners' officers. Mr. John Troutbeck, coroner for the South-Western District of London, supported these views. The Lord Chancellor, in reply, promised to give his most serious consideration to the matter, which he considered to be of real and great importance, and added that without loss of time he would investigate the facts personally. We can add our wishes to those of the members of the deputation, that our present very haphazard and even dangerous system of death certification may soon be superseded by some better method.

INDUCTION OF LOCAL ANÆSTHESIA BY COCAINE CATAPHORESIS.

CATAPHORESIS, or the introduction of drugs into the system by electricity, is a method which promises much and is still in its infancy. In the *Journal of the American Medical Association* of Feb. 23rd Dr. D. T. Quigley has reported very satisfactory results from the induction of local anæsthesia by cocaine cataphoresis. He claims that under it half the operations of surgery could be performed with greater safety and less worry to both the surgeon and the patient. He has used the method for removal of tumours of the breast and epithelioma of the lip, herniotomy, removal of hæmorrhoids, and destruction of moles. It may be employed for any operation which does not involve the great cavities of the body or in which the field does not extend too far from the surface to be reached by cocaine. The technique is as follows. A piece of aseptic gauze is folded four times and cut of the size of the part to be operated on. The gauze is saturated with a solution composed of cocaine hydrochlorate, one and a half drachms, solution of adrenalin (1 in 1000), two drachms, in sterile water to 2 ounces. The adrenalin constricts the vessels and renders the operation almost bloodless, but secondary hæmorrhage occurs in about 1 case in 4. The gauze is covered with metal foil and connected with the positive pole of the battery. The circuit may be completed by the patient holding in his hand a wet sponge electrode connected with the negative pole, or better, a large pad electrode may be attached to the skin by a bandage near the seat of operation. If the operation is on a limb the negative electrode may be attached on the opposite side to the positive one, and both may be held in position with the same bandage. But care must be taken that the skin between the poles is perfectly dry; otherwise the current will follow the wet surface and not pass through the skin. The time required is from 15 to 30 minutes and may be longer if a deep effect is necessary. Dr. Quigley has never observed any toxic effects from absorption of cocaine. A battery of 20 or 30 wet or dry cells should be used. A rheostat to control the current is useful but not necessary, as this may be accomplished by diminishing or increasing the number of cells. The current should be as strong as the patient can bear without discomfort; a milliamperemeter is unnecessary. After the current is turned on the edge of the foil-covered gauze should be turned every five minutes and fresh solution applied, as the gauze should be well saturated to get the best effect. In operating on hæmorrhoids the gauze should be applied to a cone-shaped metal electrode large enough to have a dilating effect on the sphincter when applied to the anus. This electrode should have a wooden or hard rubber handle and be pressed firmly into the anus by an assistant. In from 20 to 30 minutes the sphincter will be considerably relaxed and the hæmorrhoidal area anæmic and numbed. If the hæmorrhoids are large and pendulous the base may be grasped gently between the blades of a forceps, each blade being wrapped with gauze saturated with the solution. The handle of the forceps is then attached to the positive pole and the circuit is completed. In a few minutes the tumour can be cut off without pain. In operating on nævi the area should be anæsthetised as described. Then the nævus is transfixed just below the surface with straight needles about one thirty-second of an inch apart. A fine wire is threaded through the eyes of the needles and attached to the negative pole. The current is passed until the spaces between the needles look seared and pale. This destroys the nævus and does not leave a scar. The same method may be used for moles but any large hairs in them must be first destroyed by the electric needle attached to the negative pole. This method of inducing local anæsthesia is preferable, Dr. Quigley considers, to Schleich's infiltration method because it is entirely painless, does not involve distension of the tissues, covers a wide area if necessary, and so far has not produced toxic effects. Dr. Quigley does not state, however, the number of cases in which the method has been employed. The anæsthesia lasts over an hour, so that ample time for the operation is afforded.

THE PHARMACOLOGY OF AN ALKALOID FOUND IN FRESH VALERIAN JUICE.

IN THE LANCET of May 20th, 1905, p. 1367, reference was made to the greater activity of fresh valerian juice as compared with the ordinary galenical preparations obtained from dried valerian root. We learn from the *Comptes Rendus* of Jan. 21st that the fresh juice has been examined by M. J. Chevalier with the result that it has been proved to contain an alkaloid and a glucoside, together with some resinous matter. A pharmacological investigation has shown that the special action of the fresh juice is due to the presence of the alkaloid and the glucoside, which are unstable bodies and undergo decomposition during the drying of the roots and the manufacture of the galenical preparations of valerian. As the alkaloid is present in the plant to the extent of only 0·015 per cent. its chemical identification will have to be delayed until sufficient is obtained for a complete examination. The pharmacological investigation of the alkaloid was conducted on dogs. It was found to exert an energetic action upon the bulb and the

medulla oblongata. The predominating action of the alkaloid is depressing and paralysing and is purely central. The depressing action is not confined to the bulb but extends along the whole of the cerebro-spinal axis. The diminution of the excitability of the cerebral centres, following the administration of the alkaloid, points to the value of preparations of fresh valerian root in the treatment of hysteria and especially of epilepsy.

CELEBRATION OF LORD LISTER'S EIGHTIETH BIRTHDAY.

A MEETING of the committee appointed to make a fitting recognition of this anniversary will be held at the Royal College of Surgeons of England, Lincoln's Inn Fields, on April 4th, at 5 o'clock in the afternoon. The business will be: 1. To consider the form and method of republication of Lord Lister's scientific papers. 2. To appoint an editorial committee to undertake the same. 3. To send greetings to Lord Lister on his birthday, April 5th, and to acquaint him with the proposals of the committee. Any communications on the subject should be addressed to Dr. Charles J. Martin, F.R.S., secretary (*pro tem.*) of the committee, at the Lister Institute, Chelsea Gardens, London, S.W.

THE "WHITE LINE" AS A SYMPTOM OF DISEASE OF THE SUPRARENAL CAPSULES.

AT a meeting of the Société Médicale des Hôpitaux of Paris on Feb. 8th M. Siredey and M. C. Tinel called attention to the phenomenon known to French clinicians as the "white line" in the diagnosis of disease of the suprarenal capsules. This phenomenon was first described by M. Sergent in 1903.[1] It is the converse of the meningeal streak. Like the latter, it is produced by drawing the finger nail across the skin of the patient's abdomen. After a period of from 30 to 60 seconds a white line appears which lasts from two to five minutes. M. Sergent has found it in Addison's disease and in a variety of conditions—the specific fevers, septicæmia, influenza, poisoning by corrosive sublimate, exhaustion from over-exertion—which were all marked by low arterial tension. He thinks that the low tension is due to some alteration in the cells of the suprarenal capsules, a conclusion which was confirmed by the fact that the administration of suprarenal extract was followed by the disappearance of both the "white line" and the low tension. He therefore regarded the "white line" as a symptom of suprarenal insufficiency and insisted upon its importance in the diagnosis of all affections of the suprarenal capsules. His observations have been confirmed by other French writers. At the meeting mentioned above M. Siredey and M. Tinel reported an interesting case of tuberculous meningitis in which the meningeal streak was replaced by the "white line" in consequence of involvement in the disease of the suprarenal capsules. A man, aged 47 years, was taken to hospital comatose. The history, given by his son, was vague. It appeared that the patient had suffered from pleurisy 10 months ago, from which he rapidly recovered. For some weeks he had shown signs of weakness, and three days before admission he was found unconscious. On admission he was in a state of profound coma, with carphology and subsultus tendinum. Trismus, rigidity of the neck, and Kernig's sign were found. The pulse was small and the respiration was irregular. Examination of the chest showed generalised bronchitic râles and consolidation at the apices. On attempting to obtain the meningeal streak a thin rose line was produced, which rapidly became white and then slowly broadened, so that after half a minute it was from one to two centimetres in breadth; it disappeared after two or three minutes. This phenomenon caused suprarenal disease to be suspected. With Potain's sphygmanometer the vascular tension was found to be only 12. There was no pigmentation of the skin nor were spots present on the mucous membranes. Death occurred on the following day. The necropsy showed meningeal, pulmonary, and peritoneal miliary tuberculosis. Neither the kidneys nor the liver showed any tubercles. But the suprarenal capsules contained large tubercles. The left capsule contained three tubercles of the size of a pea and several smaller ones; the right capsule was less involved. Thus M. Sergent's conclusion as to the value of the "white line" as a symptom of suprarenal disease was confirmed. In the discussion which followed M. Sergent referred to the case of a girl who presented symptoms of meningitis. He could not obtain the meningeal streak but after some seconds a white line appeared which lasted two or three minutes. The patient died and the necropsy showed absence of disease of the meninges but complete caseation of the suprarenal capsules. In connexion with this case M. Sergent has described a pseudo-meningeal syndrome due to suprarenal insufficiency in which the "white line" is present. As to the mechanism of the production of the "white line" it appears to be a reflex spasm of the capillaries provoked in conditions of low vascular tension and vaso-dilatation.

[1] Presse Médicale, Nov. 25th.

WHOLE MEAL *v.* WHITE BREAD.

THE suggestion of the Bread and Food Reform League that "most people can digest the whole of the wheat grain if it be ground of a uniform very fine quality of properly selected wheat," would appear to receive endorsement in some experimental work on the digestibility of foods which has been undertaken by Professor Snyder on behalf of the United States Department of Agriculture. In a pamphlet written by Miss May Yates, the honorary secretary of the league, the chief points of this inquiry are brought out but the general result appears to be that it is essential that the whole meal should be ground and re ground until it will all pass through a fine sieve and thus that a mechanical condition should be obtained which will enable the gastric juice to act on all the nutrients. According to Professor Snyder, there is more protein, pound for pound, in entire wheat than in patent flour, and therefore if in these experiments the body secured less protein and energy from the coarse flour than from the fine flour it was simply because the meal was not ground fine enough. An experiment showed that whereas from 2463 grammes of patent white bread (containing 133·2 grammes of protein with a loss of 26·9 grammes of protein) only 106·3 grammes of protein were utilised, while with a consumption of 1558 grammes of bread made from flour with the addition of 14 per cent. of bran (containing 148 grammes of protein, with a loss of 14·9 grammes) there were assimilated 133·1 grammes of protein. In other words, a consumption of more white bread amounted to an appropriation of 26·8 grammes less of protein than from a smaller quantity of bread with 14 per cent. of finely ground bran. In addition to this, it is well to bear in mind the fact that with the rejection of the bran an enormous loss of valuable mineral material is entailed. Thus there is nearly double the amount of lime salts in whole wheat meal that there is in fine white flour, and one pound of whole wheat meal has 119 grains of mineral matter and 59·1 grains of phosphoric acid, whilst one pound of white flour has only 49 grains of mineral matter and 21·3 grains of phosphoric acid. This subject has, of course, been very widely debated and it seems to us that there is something to be said on both sides. There can be little doubt that the conclusion hitherto reached that the defective absorption of

wholemeal bread is due to the large amount of cellulose or branny particles which it contains is correct. The contention is probably also correct that this defective absorption is to be attributed largely to incomplete grinding and that the absorption would be greater if the flour was reduced to a very finely divided powder. Even, however, when the branny particles are reduced to a fine powder careful experiments have shown that bran is never so easily absorbed as flour.

THE MANUFACTURE OF ELECTROLYTIC DISINFECTING FLUID AT POPLAR.

THE electrolytic apparatus which was installed at Poplar in February, 1906, under the direction of Mr. F. W. Alexander, the medical officer of health of that borough, for the production of disinfecting fluid has now been in going order for over a year and a copy of the balance sheet, representing the cost of the manufacture, has reached us. Mr. Alexander states that in comparing the expenditure of the year 1906 with that of 1905 it will be seen that there has been a saving of £265, and if the sum of £30 paid to the electricity department as rent and supervision be omitted from the account there has been brought about a saving of nearly £300 compared with the cost of carbolic disinfectants, and this amount does not include any charge for the quantity furnished to the guardians, as the fluid was supplied to them gratis. The initial outlay amounted to about £583. Mr. Alexander considers that "the step initiated has proved itself overwhelmingly satisfactory from every point of view, particularly that of the public health of the district during the period for which the plant has been at work." The annual notification rate per 1000 living in the borough was 6·2 against that of 7·5 for London for the year 1906, the death-rate of the borough being 17·5 per 1000 living. It may be added that the fluid prepared in October, 1906, by the improved method has remained constant in strength as regards available chlorine up to March, 1907.

GROCCO'S SIGN IN THE DIAGNOSIS OF PLEURAL EFFUSION.

IN 1902 Grocco of Florence described a new sign of pleural effusion—a paravertebral triangle of dulness on the opposite side. He found that when percussion is performed from above downwards along the vertebral spines while the patient is in the sitting position dulness, at first relative and then absolute, is obtained. Similarly, on percussing downwards on the healthy side in lines parallel to the spine a paravertebral triangle of dulness may be defined. One side of the triangle is represented by the spines of the vertebræ, the base by the line of the lower border of thoracic resonance for a distance of two, three, or more centimetres from the spine, and the outer side by a line rising from the outer extremity of the base obliquely to unite at an acute angle with the median line at the upper limit of dulness. By radiographing a cadaver in which the chest on one side had been filled with a solution of acetate of lead Grocco showed that the shadow of the solution extended sufficiently past the middle line to account for the triangle of dulness. He claimed that this sign was of value in distinguishing pleural effusion from pulmonary consolidation. This has been confirmed by many observers. An important article on the subject, by Dr. W. S. Thayer and Dr. M. Fabyan, has been contributed to the *American Journal of the Medical Sciences* for January. In 30 out of 32 cases of pleural effusion they clearly demonstrated a paravertebral triangle of dulness. In one of the remaining cases the effusion was small and the examination was rather hastily and imperfectly performed but a small indefinite area of dulness was found. In the other case the absence of the paravertebral triangle was explained by the position of the exudation, which was an interlobar empyema. The sign may therefore be regarded as constant in cases in which there is free fluid in the pleural cavity. Dr. Thayer and Dr. Fabyan also found that over the paravertebral triangle the respiratory murmur is often suppressed and similar to that heard over the effusion. Ægophony or a nasal quality of the vocal resonance may also be heard. The sound produced by striking a coin on the front of the chest below the level of the effusion shows the same metallic ring over the triangle as over the effusion on the affected side. These signs may be so marked as to make possible the definition of the triangle by auscultation. When the patient lies on the affected side the triangle diminishes or disappears and when he assumes the erect posture or lies on the other side it returns. In three cases of encapsulated effusion the paravertebral triangle proved of diagnostic value. Thus, a man, aged 23 years, had a severe attack of typhoid fever. An area of absolute dulness was found below the angle of the right scapula with the patient lying on his left side. The dulness ended sharply at the posterior axillary line. Over the dull area vocal fremitus was diminished, respiration was distant and tubular, the respiratory murmur had a somewhat metallic quality, and the voice sounds were nasal. On the left side was a paravertebral triangle of dulness measuring eight by five and a half centimetres. Puncture of the dull area yielded purulent fluid. Operation showed an encapsulated empyema. In cases of pneumonia a small strip of dulness may be found along the spine on the opposite side but Dr. Thayer and Dr. Fabyan were able to detect only once anything approaching a paravertebral triangle, and in this the dulness was not very definite and showed little or no alteration on change of posture.

THE INSANITARY CONDITION OF LONGTON.

A Local Government Board inquiry has been held recently at Stoke-upon-Trent to consider the question of the federation of the municipal boroughs of Stoke-upon-Trent and Longton and the urban district of Fenton into one county borough, when some remarkable evidence was given as to the insanitary condition of Longton. Dr. J. W. Dawes, the medical officer of health of this borough, said that the population was estimated at 36,797 and the number of houses at 7826. The birth-rate was 36·4 and the average death-rate for ten years was 22·4. The infant mortality in ten years gave a return of 228·7 per 1000 births. He considered that there had been great improvement in the sanitary condition of the town, but admitted that the death-rate and infantile mortality were both very high. From his evidence it appeared that property owners on the corporation had prevented the conversion of privies into water-closets. In 1903 he had to report on a well on the corporation sewage farm which was used in connexion with the dairy on the farm, from which milk was supplied to the inhabitants of the town. Nothing was done to remedy this state of things till 1906 when the waterworks supply was put in and he did not know whether or not the well was still in use. When questioned as to cowsheds within the borough he admitted that there was one registered for 19 cows where 38 were kept. In this case the air space was 420 cubic feet per cow and the sheds were dirty, dark, and badly ventilated, whilst the drainage was imperfect. He knew another cow-shed registered for 22 cows where 42 were kept and where the air space was 300 cubic feet per cow. As to common lodging-houses there were two or three places used as common lodging-houses which were not registered, and he knew a lodging-house registered for 25 lodgers where three of the sleeping-rooms had no fireplace or substitute for

ventilation. Dr. George Reid, medical officer of health of the county of Stafford, said he could hardly find words to describe the condition of Longton from a sanitary point of view. He had inspected the common lodging-houses, slaughter-houses, and dairies and cowsheds and speaking generally he did not know any other town in Staffordshire even approaching Longton. He spoke of overflowing ashpits, badly paved yards, and defective and dirty cesspools and closets, and described one court containing 14 houses which were dilapidated, filthy, and badly drained, with foul privies six feet from the back doors of the houses. Longton had a refuse destructor but it was either not made use of or it was not capable of doing the work because of the overflowing condition of the ashpits and—where there were ashbins—the ashbins. He confirmed Dr. Dawes's statements as to the condition of cowsheds and lodging-houses. With regard to infantile mortality, for Stoke it was 170 per 1000 births, for Fenton 194, and for Longton 229, that being the average for the ten years 1896–1905. Some little time ago Longton appeared to have the largest infantile mortality in England and both this and the high death-rate must be due to a large extent to the insanitary condition of the town.

EPIDEMIC CEREBRO-SPINAL FEVER.

THE notifications of cerebro-spinal fever indicate a progressive extension of the disease throughout the country without exceptional prevalence in any fresh locality. A large number of sanitary authorities have now made the disease compulsorily notifiable. The public health committee of the London County Council announces that nine cases have been notified in London since March 12th, but one of them was eventually found to be a different disease. Cases have occurred at Horton, near Leek in Staffordshire, and at Bebside, near Blyth in Northumberland. In Glasgow the only information obtainable at present is that there were 102 cases under treatment on March 22nd. Cases have also occurred at Falkirk, at Leith, at Govan, and at Denbeath in Fifeshire. In Belfast there were 39 patients under treatment on March 22nd; 8 new cases were reported on March 25th, making since the commencement of the epidemic a total of 215 cases, among which there have been 115 deaths. On March 20th a case was discovered in the workhouse at Cork.

THE death is announced, in his seventy-first year, at Wiesbaden, of Professor Ernst von Bergmann, the eminent German surgeon. We hope to give an extended account of his career in a future issue.

THE Department of Public Health of Queensland, in a bulletin dated Feb. 9th, states that no further cases of plague have occurred in the New Farm area. 3 other cases, however, have been notified—viz., Case 20, a male, aged 20 years, who was attacked on Jan. 31st; Case 21, a female, aged 58 years, who was attacked on Jan. 30th and died on Feb. 4th; and Case 22, a male, aged 50 years, and attacked on Feb. 4th. A bulletin, dated Feb. 16th, reports 1 further case, No. 23, a male, aged 19 years, who was attacked on Feb. 7th. A case of plague is also reported from Ipswich—viz., a male, aged 35 years. The case was not reported till after the patient's death. As regards Port Douglas 6 fresh cases occurred during the week ending Feb. 9th but no further cases for the week ending Feb. 16th. As regards the Mauritius a telegram from the Governor received at the Colonial Office on March 22nd states that no cases of plague were reported during the week ended March 21st.

THE Thirty-sixth Congress of the German Surgical Society, the Sixth Congress of the German Society for Orthopædic Surgery, and the Third Congress of the German Roentgen Society will all meet in Langenbeck House, Berlin, in the beginning of next week.

AT an extraordinary Comitia of the Royal College of Physicians of London held on Monday last, March 25th, Sir Richard Douglas Powell was re-elected President.

THE SECOND INTERNATIONAL CONGRESS ON SCHOOL HYGIENE.

UNDER the Presidency of the Lord Mayor a meeting was held at the Mansion House on March 20th to promote the interests of the forthcoming Congress on School Hygiene which is to be held in London in August of this year. Among those present on the dais were Sir Lauder Brunton, President of the Congress, Lord Ramsay, Sir John Cockburn, Dr. T. J. Macnamara, M.P., Sir Richard Martin, Sir Edwin Brabrook, the Greek, Chinese, Uruguayan, and Servian Ministers, the Agent-General for Natal (Sir Thomas E. Fuller), the Agent-General for South Australia (Mr. J. Jenkins), Sir Cuthbert Quilter, Dr. J. Kerr, and Mr. Alfred Mosely.

The LORD MAYOR, in opening the proceedings, said that the meeting was one of the utmost importance to the health of infants and school children.

Sir LAUDER BRUNTON remarked that the congress was an assemblage from every civilised country in the world of people who were interested in the health of school children. Of the subjects to be dealt with by the congress, the first group was concerned with the best methods of training for the minds and bodies of healthy scholars in and out of school, the second group with children who were defective in body or mind, the third group with the important subjects of medical inspection, the instruction both of teachers and of children in the laws of health, and the health of the teaching profession, and the fourth with residential schools, school buildings, and equipment. With regard to medical inspection he observed that it was fervently hoped that the Bill for the compulsory medical inspection of children which was before Parliament would soon became law, for medical inspection was the groundwork upon which the superstructure of school hygiene must be built. Without medical inspection no proper system of physical education was possible. Defective sight alone was the cause of much misery to children at school, for it not only hindered their learning but caused them sometimes to be punished for stupidity and led to most distressing headaches which were a torture to the child. Schools, too, might become a hot-bed of infection for a whole district. As a result of the conference they would probably obtain a scheme of physical training superior to any in existence. The mental and bodily advantages to be derived by the children in this country from information afforded by the congress might not only prevent them from falling into the ranks of the unemployed, but might, in many cases, prevent them from becoming criminals.

Dr. MACNAMARA said that much had been done in the interests of the child during the past 30 or 40 years, but the time had arrived when it was necessary, in the interests of the nation as well as of the children, that the care of the child must be placed on an accurate and scientific basis. The teacher was placed at a great disadvantage by reason of the lack of scientific data upon which to base his methods of dealing with children who showed physical defects, and there was also need for practical examples being set before the child at school in the way of perfectly constructed buildings from a sanitary point of view.

Sir JOHN COCKBURN said that the care of the children was one of the most important problems that could confront any people. Nations depended for their existence on the way in which they dealt with the children who would be the adults of the next generation.

Sir RICHARD MARTIN, in appealing for subscriptions, pointed out that the money spent on the object which the meeting had met to promote was a sound investment and not a charity, for the result of the congress would be that the educational authorities would learn how best to spend the ratepayers' money economically.

Mr. ALFRED MOSELY, in moving a vote of thanks to the

Lord Mayor, referred to his investigation in America where he found educational methods much in advance of English methods and said that it was a very false kind of economy to neglect the health of the future generations.

Mr. SYKES, President of the National Union of Teachers, seconded the proposition, and a unanimous vote of thanks was accorded to the chairman with acclamation.

The LORD MAYOR briefly replied and the proceedings terminated.

Looking Back.

FROM

THE LANCET, *SATURDAY*, March 28th, 1829.

FOREIGN DEPARTMENT.

CASE OF POISONING BY CHEESE.

DR. WESTRUMB of Eimbeck, in the kingdom of Hanover, was, on the 10th of November, 1826, called to a family, consisting of a middle-aged man, his daughter, a girl of ten years, and a female relation, about sixty years of age, who, an hour after having eaten of a cheese lately bought, had been suddenly seized with symptoms of poisoning, as violent colic pain, vomiting, diarrhœa, tenesmus, &c. On his arrival, he found them with the abdomen swelled, very painful on pressure, especially in the hypochondria, the pulse very small and frequent, the pupils dilated, and complaining of violent headache, vertigo, great debility, and sickness; the rejected matter had the smell of cheese, and was apparently of an alkaline nature. An emetic, and aperient injections, were immediately ordered, when Dr. Westrumb was sent for to another family, consisting of four persons, who, a short time after, having eaten some cheese bought at the same place, had been simultaneously affected with similar symptoms, but in greater intensity. Besides the remedies used in the first cases, very strong coffee, and a solution of boracic acid were ordered. After this treatment had been continued for two days, five of the patients perfectly recovered; in the other two, in whom the symptoms had been most violent, the affection of the head attained to such a degree as to require the application of leeches, and cold affusion; after about a week, they were also convalescent. M. Sertuerner having been requested to examine the substance which had been the probable cause of the symptoms of poisoning, came to the following results: under the continued action of alcohol, two different substances were obtained, the one of a black colour was precipitated, the other of an oily consistence, brown colour, astringent, nauseous taste, and a very penetrating, rancid smell, collected on the surface of the liquid; it was found soluble in hot water and alcohol, changed the colour of litmus to red, and, when mixed with alkalies, formed a soapy mass. The black substance was liquid, insoluble in hot water and alcohol, and being submitted to heat, gave an extract of an acid nature, caseous smell, and containing an ammoniacal salt, the acid of which could not be ascertained. The maceration of the residuum in hot alcohol produced, at first, no change; but after some time a greyish white substance spontaneously precipitated from the alcohol, which melted at a slight degree of heat, and was also apparently of an acid nature. The three substances, thus prepared, but especially the two former, were found to be very powerful poisons; fifteen grains of them injected into the stomach of a large dog, caused a violent inflammation of the intestinal canal, and the subsequent death of the animal.

Dr. Westrumb regards the deleterious principle in the cheese as belonging to the class of narcotico-acrid poisons, and attributes its production to the following causes:

1. The milk being furnished by cows, which have eaten of poisonous vegetables; this will, however, be but very seldom the cause, as, under these circumstances, the secretion of milk is greatly diminished, or even entirely suspended.

2. The preparation or conservation of the cheese in metallic vessels. In some cases of poisoning by cheese, traces of copper and tin were actually discovered in it, although but in very small quantities. The Gazette de Santé, of 1766, No. 22, contains a case of this kind.

3. Adulteration of the cheese, especially with the seeds of hyosciamus, which had inadvertently been mixed with it, instead of cumin seeds.

4. The formation of a poisonous substance by the chemical decomposition of the cheese. This seems to have taken place in most instances, and, as is shown by M. Sertuerner's analysis, did so in those just described.—*Horn's Archiv.*

"SANATORIA FOR CONSUMPTIVES."

UNDER this title Mr. EDWIN T. HALL, Vice-President of the Royal Institute of British Architects, on March 22nd, before the Architectural Association, Westminster, read a paper which had many points of medical interest and led up to an interesting discussion.

Mr. Hall's paper was mainly devoted to a description of various existing sanatoriums in this country and abroad and a number of interesting photographs and plans were exhibited on the walls of the room and also by means of the lantern. After discussing the various points brought out by the illustrations in an instructive manner, Mr. Hall, whose claim to having given a great deal of thought to the question is evidently justified, came to some important conclusions on the problem of how to supply cheap sanatoriums. Huts, he said, were cheap but very temporary, and cost a great deal to maintain, while they also might offer special fire risks. He then showed on the screen illustrations of the kind of sanatorium which he considered would be the cheapest permanent form for cases of pulmonary tuberculosis. He described the buildings as made of an inclosing material, including that for floors, which is non-combustible and impervious to rain and vermin. It is made in dry slabs of standard size, which are practically universal in application for the unit. "A sanatorium on these lines," he said, "complete with all essential administrative buildings to suit any required number of beds, with drains, fittings to kitchen and laundry, and water storage, can be erected on a suitable and reasonably accessible site at a cost of about £85 to £105 per bed, depending on its size. I call the design the standardised expanding sanatorium because if a small institution erected on these lines requires to be extended to meet growing wants, this can be readily accomplished by adding units to the wards and administration." As examples of what could be done, Mr. Hall quoted one sanatorium of 16 beds with its appropriate administration to cost about £1680, one of 32 beds to cost about £3170, and one of 48 beds to cost about £4080. None of these buildings compete with the large permanent sanatoriums which will remain. Mr. Hall's aim has been different. "In June, 1905," he said, "a profitable discussion of the whole subject took place in London, and Dr. Heron remarked that poor consumptives should be sent into sanatoria for their own sakes and for the sake of the healthy community, which could not be done if sanatoria were built costing £200 to £300 per bed. A sanatorium well-equipped for the service of the poor should not cost more than £80 per bed."

Mr. Hall thought that his standardised sanatoriums would meet the views of Dr. Heron. The buildings had in them nothing in common with the temporary wood hut or galvanised iron buildings with timber construction and cavity walls and roofs. They had solid thin walls, roofs, and floors, with no cavities. They have smooth internal surfaces, avoiding the expense of plaster or wood covering. These surfaces might be left bare or might be distempered or painted. The drainage was designed for soiled water only, which if no sewers were available would be taken into cesspools and emptied by closed suction carts. A water-supply was assumed to be available, either from public mains or a local pure stream or other source. Fireplaces in all rooms were provided to avoid the great expense of an engineering plant. A gas-supply was required for heating bath water by geysers, and gas or oil might be used for lighting. All the joinery required could be prepared in labour centres and carted on to the site ready for immediate erection. In all cases the sanatorium was divided into units of eight beds, each unit containing six wards with single beds and one with two beds. With a total of only 16 beds it was assumed that the medical work would be done by a non-resident physician, the patients being in charge of a qualified matron with nurses. With 32 patients, a resident medical man was provided for in addition to the matron and the nurses and servants were increased. With 48 patients quarters were provided for two medical

men, a matron, and an assistant matron or housekeeper, with a larger staff of nurses and servants. A small consulting-room and a waiting-room were also provided. All the buildings were one-storeyed. All patients' rooms faced south-south-east or south-south-west; all staff rooms faced either south or east and west so that all got ample sunlight. All rooms were approached by corridors or covered ways, protected from rain. All patients' rooms had glass verandah shelters on the southern side. The open-air treatment was fully adopted.

Colonel GERRARD CLARK, in proposing a vote of thanks to Mr. Hall, asked whether the estimates given for cheap sanatoriums included furniture.

Mr. HALL replied that the estimates were for buildings alone.

Dr. H. T. BULSTRODE said that in commenting upon the lecturer's paper he was somewhat handicapped by reason of his official position. He had visited almost every one of the sanatoriums, both in this country and abroad, mentioned by Mr. Hall and he was at the present moment preparing a report to the Local Government Board on the question of sanatoriums. Therefore he could not express his personal views. At the same time, he had every sympathy with Mr. Hall's attempt to provide cheap sanatoriums. He mentioned that a sanatorium was now being erected in Kent by certain friendly societies much on the same lines as the German institutions, at a cost of about £100 per bed. The reason that Germany was provided with so many sanatoriums was on account of the system of compulsory insurance which prevailed there. The building of such institutions was directly encouraged by the insurance societies which found it in their interests to do so. It was not true, though it was generally believed, that consumption was on the increase in this country; as a matter of fact, it had been dying out for the past 50 years. If it decreased at the same rate as it had been doing for the last half century in the course of the next 30 years it would be as rare as leprosy. It was really a question of increasing the rate of decrease. Consumption was largely a social manifestation and as the social condition of the people improved so would tuberculosis fade away.

Dr. T. GLOVER LYON said that too much was made of the questions of sites and accommodation. Provision should be made for more men than women as the number of male patients was double the number of female patients, probably because the woman could not afford to stay away from her home so long as the man. From his experience at the City of London Hospital for Diseases of the Chest patients did better on the balcony system than in the wards of hospitals and in a sense walls were in the way. What was required was a room to sleep in with three sides arranged so that the amount of air flowing through the room could be regulated. If provision was made to shelter the patients from keen east and north-east winds all that was required were four posts and a roof. In these circumstances it seemed remarkable that efforts should be made to build palaces. The size of the room was absolutely a matter of æsthetics and it had nothing whatever to do with treatment. It had a lot to do, however, with the cost. Mr. Hall's plan for building sanatoriums for £85 per bed should be made as widely known as possible.

Mr. FORSYTH said that they were suffering from too much architecture. He referred to an experience at Mount Vernon Hospital, where it was found that patients removed to tents while the extension of the buildings was being proceeded with improved, while those in the hospital lagged behind.

The CHAIRMAN (Mr. NEEDHAM WILSON) said that some provision ought to be made for patients continuing attached to the sanatorium instead of being somewhat prematurely discharged in the interests of more pressing cases. Some sort of a farm colony might be provided.

A vote of thanks to Mr. Hall was then carried with acclamation, to which that gentleman made a brief reply.

MEDICINE AND THE LAW.

The Case of Caleb Charles Whitefoord.

ON March 19th Caleb Charles Whitefoord, formerly a medical man, was convicted at the Central Criminal Court, before the Lord Chief Justice, for using an instrument upon a young woman with intent to procure miscarriage and was sentenced to ten years' penal servitude. He had been sentenced to five years' penal servitude for a similar offence in 1896, and from the information before the court Lord Alverstone expressed himself as having no doubt that the prisoner, since his release, had carried on his illicit practices among young women for five or six years. His lordship inquired from the detective in charge of the case what the profits of such acts might be and was informed that the price paid to Whitefoord varied from £1 to £10. No doubt to those who have once fallen into the temptation to make money by this particular crime it presents considerable attractions, for although it is carried out with accomplices who are strangers to the principal criminal it is entirely to their interest, as it is to his, to maintain secrecy, and it is to be noticed how often one conviction follows another with criminals of this class. The crime, moreover, is one which lends itself readily to the extortion of blackmail. In the case in question the prisoner put forward his age and bodily infirmities in asking for a lenient sentence but his lordship considered that these were outweighed by the danger of his acts and the misery caused and encouraged by the continuance of such malpractices unchecked.

"At Present in Good Health."

Lawyers have from time to time discussed what is a healthy person, notably in the case of the pregnant and the insane. A recent insurance case, which is reported from the Australian courts, contains a full discussion of this question from the standpoint of the law. On Sept. 14th, 1902, Mrs. Kidman took out a policy of life insurance from the National Mutual Life Association of Australians; one of the conditions was that the would be holder "is at present in good health." The day after she had been accepted by the office she sent for her medical adviser, with the result that she was examined under an anæsthetic on the 16th and an ovarian tumour was diagnosed. She went at once into a hospital and in the course of a few days the tumour was removed; she died, however, from the effects of the operation on the 26th of the same month. It further appeared that a year previously she had consulted a medical man and had been advised as to the need of a surgical operation before her disorder could be cured. Upon the widower claiming the insurance money the association repudiated the policy as having been obtained owing to false statements. In the first instance the jury decided in favour of Mr. Kidman on the facts of the case as adduced in court. A new trial was moved for and granted and the court again upheld the policy, for it was ruled that the disorder from which the deceased suffered was not one which, except for the unsuccessful operation, was likely to shorten life. Upon appeal to the High Court a broader view was enunciated and judgment was given for the defendants on the ground that the phrase "at present in good health" must be taken to mean that "the person insured was free from any apparent sensible disease or symptom of disease and was unconscious of any derangement of the bodily functions by which health can be tested."

VITAL STATISTICS.

VITAL STATISTICS OF LONDON DURING FEBRUARY, 1907.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 6·8 per 1000 of the population, estimated at 4,758,218 persons in the middle of the year. In the three preceding months the rates had been 11·1, 9·5, and 6·8 per 1000 respectively. The lowest rates last month were recorded in Kensington, Chelsea, the City of Westminster, Stoke Newington, Holborn, and the City of London; and the highest rates in Paddington, Bethnal Green, Deptford, and Woolwich. The prevalence of scarlet fever showed a slight increase over that recorded in the preceding month; among the various metropolitan boroughs this disease was proportionally most prevalent in Paddington, Hampstead, Shoreditch, Bethnal Green, Greenwich, and Woolwich. The Metropolitan Asylums hospitals contained 2829 scarlet fever patients at the end of last month, against 4003, 3787, and 3116 at the end of the three preceding months; the weekly admissions averaged 323, against 430, 328, and 299 in the three preceding months. Diphtheria showed no appreciable variation in

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING FEBRUARY, 1907.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1907.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.												
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.	Deaths of Infants under one year to 1000 births.
LONDON	**4,756,218**	**1**	**1417**	**625**	**1**	**96**	**1**	**28**	**329**	**—**	**2498**	**6·8**	**—**	**130**	**28**	**72**	**164**	**—**	**10**	**—**	**62**	**466**	**1·3**	**6701**	**18·4**	**117**
West Districts.																									
Paddington	149,909	—	39	17	—	3	—	2	6	—	117	10·2	—	—	2	—	9	—	—	—	1	12	1·0	203	17·7	134
Kensington	181,842	—	37	10	—	1	—	—	4	—	52	3·7	—	—	—	1	9	—	—	—	—	10	0·7	283	20·3	186
Hammersmith	122,337	—	31	20	—	2	—	1	6	—	60	6·4	—	4	2	3	4	—	—	—	—	13	1·4	165	17·6	154
Fulham	166,749	—	39	28	—	5	—	1	6	—	79	6·2	—	3	—	2	8	—	1	—	5	19	1·5	260	15·6	141
Chelsea	74,857	—	18	6	—	—	—	—	2	—	26	4·5	—	—	—	1	1	—	—	—	—	2	0·3	81	14·1	85
City of Westminster	172,219	—	26	21	—	1	—	—	12	—	60	4·5	—	—	1	4	1	—	—	—	5	11	0·8	236	17·9	142
North Districts.																									
St. Marylebone	127,718	—	17	18	—	3	—	—	14	—	52	5·3	—	—	1	1	2	—	—	—	1	5	0·5	189	19·3	116
Hampstead	91,137	—	37	12	—	3	—	1	3	—	56	8·0	—	—	1	—	1	—	1	—	—	3	0·4	82	11·7	125
St. Pancras	236,753	—	46	23	—	1	—	—	17	—	87	4·8	—	—	—	2	7	—	—	—	1	10	0·6	352	19·4	122
Islington	347,017	—	77	19	—	7	—	2	17	—	122	4·6	—	—	2	2	18	—	1	—	5	28	1·1	514	19·3	126
Stoke Newington	53,613	—	5	9	—	1	—	—	1	—	16	3·9	—	—	—	—	2	—	—	—	—	2	0·5	50	12·2	77
Hackney	232,903	—	71	47	—	8	—	2	23	—	151	8·4	—	5	1	7	12	—	2	—	5	32	1·8	327	18·3	113
Central Districts.																									
Holborn	55,134	—	1	5	1	1	—	—	4	—	12	2·8	—	—	—	2	2	—	—	—	3	7	1·7	103	24·4	77
Finsbury	96,732	—	34	4	—	3	—	—	7	—	48	6·5	—	—	—	3	4	—	—	—	1	8	1·1	177	23·9	121
City of London	20,310	—	2	—	—	—	—	—	—	—	2	1·3	—	—	—	—	—	—	—	—	—	—	—	36	23·1	250
East Districts.																									
Shoreditch	115,662	—	49	16	—	2	—	—	6	—	73	8·2	—	15	2	2	4	—	—	—	2	25	2·8	224	25·2	201
Bethnal Green	130,831	—	56	26	—	1	—	—	11	—	94	9·4	—	11	1	2	8	—	—	—	3	25	2·6	230	22·9	145
Stepney	308,925	—	97	44	—	6	—	1	19	—	167	7·0	—	21	—	10	1	—	2	—	4	38	1·6	396	16·7	100
Poplar	171,086	—	53	9	—	5	—	1	15	—	83	6·3	—	2	1	3	2	—	—	—	1	9	0·7	247	18·8	112
South Districts.																									
Southwark	209,781	—	75	21	—	7	—	2	30	—	135	8·4	—	2	—	2	15	—	—	—	3	22	1·4	333	20·7	142
Bermondsey	128,263	—	44	20	—	7	—	—	6	—	77	7·8	—	9	5	3	9	—	—	—	—	26	2·6	229	23·3	164
Lambeth	318,538	—	74	26	—	10	—	6	15	—	131	5·4	—	1	3	3	10	—	2	—	5	24	1·0	483	19·8	120
Battersea	181,736	—	61	42	—	6	—	2	10	—	121	8·7	—	1	—	4	2	—	1	—	2	10	0·7	245	17·6	119
Wandsworth	281,419	—	66	54	—	3	—	3	16	—	142	6·6	—	5	—	1	7	—	—	—	8	21	1·0	322	14·9	118
Camberwell	277,059	—	95	20	—	1	—	2	26	—	144	6·8	—	12	3	2	15	—	—	—	4	36	1·7	363	17·1	130
Deptford	116,510	—	45	38	—	4	1	—	18	—	106	11·9	—	11	1	6	2	—	—	—	—	20	2·2	158	17·7	104
Greenwich	107,222	—	48	19	—	—	—	1	17	—	85	10·3	—	9	—	3	2	—	—	—	1	15	1·8	132	16·0	70
Lewisham	152,532	—	36	24	—	—	—	1	6	—	67	5·7	—	1	—	3	7	—	—	—	—	11	0·9	165	14·1	116
Woolwich	129,336	—	88	27	—	5	—	—	12	—	132	13·3	—	18	2	—	—	—	—	—	2	22	2·2	176	17·7	178
Port of London	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

prevalence from that recorded in January; the notifications of this disease last month were proportionally most numerous in Hackney, Bethnal Green, Battersea, Wandsworth, Deptford, and Woolwich. The number of diphtheria patients under treatment in the Metropolitan Asylums hospitals, which had been 1075, 995, and 921 at the end of the three preceding months, had further declined to 916 at the end of last month; the weekly admissions averaged 126, against 153, 128, and 124 in the three preceding months. The prevalence of enteric fever, which had shown a continued decline during the three preceding months, decreased still further in February; among the various metropolitan boroughs this disease was proportionally most prevalent in Hampstead, Hackney, Southwark, Bermondsey, Battersea, and Woolwich. There were 103 enteric fever patients under treatment in the Metropolitan Asylums hospitals at the end of last month, against 161, 134, and 100 at the end of the three preceding months; the weekly admissions averaged 16, against 24, 18, and 14 in the three preceding months. The greatest proportional prevalence of erysipelas was recorded last month in St. Marylebone, Hackney, Southwark, Camberwell, Deptford, and Greenwich. The 28 cases of puerperal fever notified during the month included six in Lambeth, three in Wandsworth, and two each in Paddington, Islington, Hackney, Southwark, Battersea, and Camberwell.

The mortality statistics in the table relate to the deaths of persons actually belonging to the several boroughs, the deaths occurring in institutions having been distributed among the boroughs in which the deceased persons had previously resided. During the four weeks ending March 2nd the deaths of 6701 persons belonging to London were registered, equal to an annual rate of 18·4 per 1000; in the three preceding months the rates had been 14·7, 18·3, and 19·9 per 1000 respectively. The death-rates last month ranged from 11·7 in Hampstead, 12·2 in Stoke Newington, 14·1 in Chelsea and in Lewisham, 14·9 in Wandsworth, and 15·6 in Fulham, to 22·9 in Bethnal Green, 23·1 in the City of London, 23·3 in Bermondsey, 23·9 in Finsbury, 24·4 in Holborn, and 25·2 in Shoreditch. The 6701 deaths from all causes in London last month included 466 which were referred to the principal infectious diseases; of these, 130 resulted from measles, 28 from scarlet fever, 72 from diphtheria, 164 from whooping-cough, 10 from enteric fever, and 62 from diarrhœa, but not any from small-pox, from typhus, or from ill-defined pyrexia. No death from any of these diseases was recorded last month in the City of London; among the metropolitan boroughs they caused the lowest death-rates in Chelsea, St. Marylebone, Hampstead, St. Pancras, and Stoke Newington; and the highest rates in Shoreditch, Bethnal Green, Bermondsey, Deptford, and Woolwich. The 130 deaths from measles were 50 below the average number in the corresponding periods of the five preceding years; among the various metropolitan boroughs this disease was proportionally most fatal in Shoreditch, Bethnal Green, Stepney, Bermondsey, Deptford, Greenwich, and Woolwich. The 28 fatal cases of scarlet fever showed a decline of ten from the corrected average number; the greatest proportional mortality from this disease occurred in Paddington, Hammersmith, Shoreditch, Bermondsey, and Woolwich. The 72 deaths from diphtheria were 11 fewer than the average; the highest death-rates from this disease last month were recorded in Hackney, Holborn, Finsbury, Stepney, Deptford, and Greenwich. The 164 fatal cases of whooping-cough were slightly below the average number in the corresponding periods of the five preceding years; among the various metropolitan boroughs this disease was proportionally most fatal in Paddington, Bethnal Green, Southwark, Bermondsey, and Camberwell. The ten deaths from "fever" were less than half the corrected average number; of these ten deaths two belonged to Hackney, two to Stepney, two to Lambeth, and one each to Fulham, Hampstead, Islington, and Battersea. The 62 fatal cases of diarrhœa were equal to the average number in the corresponding periods of the five preceding years; this disease showed the greatest proportional mortality in Fulham, the City of Westminster, Hackney, Holborn, Bethnal Green, and Wandsworth. In conclusion, it may be stated that the aggregate mortality from the principal infectious diseases in London last month was nearly 24 per cent. below the average.

Infant mortality, measured by the proportion of deaths under one year of age to registered births, was equal to 127 per 1000. The lowest rates of infant mortality were recorded in Chelsea, Stoke Newington, Holborn, Stepney, and Greenwich; and the highest rates in Kensington, the City of London, Shoreditch, Bermondsey, and Woolwich.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: A. L. Christie to the *Hawke*, E. C. Ward to the *Barfleur*, J. Jenkins to the *Hood*, J. C. Ferguson to the *Ariadne*, and J. C. Wood to the *Andromeda*. Staff Surgeons: W. L. Martin to the *Ganges*, for Shotley Barracks; A. W. B. Livesay to the *Bonaventure* on commissioning; J. W. Craig to the *Hawke*, H. S. Burniston to the *Cumberland*, A. H. Jeremy to the *Carnarvon*, and J. Martin to the Royal Marine Depôt, Deal. Surgeons: L. Lindop to the *President*, for three months' study at West London Hospital; F. M. V. Smith to the *Cumberland*; H. A. Browning to the *Pembroke*, additional, lent to *Triton* for surveying season; A. F. Fraser to the *Donegal*, F. E. Bolton to the *Barfleur*, H. G. T. Major to the *Hood*, E. S. Wilkinson to the *Achilles* on commissioning, and R. W. G. Stewart on commissioning.

ROYAL ARMY MEDICAL CORPS.

The undermentioned lieutenants to be captains (dated Feb. 28th, 1907):—Arthur C. H. Gray, Douglas P. Watson, Thomas S. Dudding, John E. Powell, Francis M. M. Ommanney, Osburne Ievers, Robert H. MacNicol, Hugh H. J. Fawcett, Santiago L. Pallant, Charles R. Sylvester-Bradley, Stanley E. Lewis, Gerard A. Kempthorne, James T. McEntire, Norman E. Dunkerton, Patrick J. Hanafin, John D. Richmond, Ernest M. Glanvill, Marmaduke C. Wetherell, Harold C. Hildreth, William MacD. MacDowall, Reginald T. Collins, Thomas J. Wright, and Arthur C. Osburn.

ROYAL ARMY MEDICAL CORPS IN INDIA.

Lieutenant-Colonel L. T. M. Nash is appointed to command Station Hospital, Barrackpore, vice Lieutenant-Colonel J. B. Buchanan; Major F. Smith, D.S.O., to command Station Hospital, Benares, vice Major H. P. Johnson; Lieutenant-Colonel M. W. O'Keeffe is appointed officer commanding Station Hospital, Karachi; Lieutenant-Colonel S. Westcott is appointed officer commanding Station Hospital, Mhow; Lieutenant-Colonel J. R. Stuart is appointed officer commanding Station Hospital, Neemuch; Lieutenant-Colonel G. E. Hale is appointed officer commanding Station Hospital, Hyderabad; Lieutenant-Colonel C. T. Blackwell is appointed officer commanding Station Hospital, Belgaum; and Lieutenant-Colonel A. Kennedy is appointed officer commanding Station Hospital, Pachmarhi. Captain H. A. Davidson has arrived at Bombay. Lieutenant-Colonel J. Battersby, Major T. H. J. C. Goodwin, D.S.O., and Captain D. Curme have embarked for England. Captain R. H. Bridges has been granted leave out of India for six months on medical certificate. The following officers have been granted extension of sick leave: Lieutenant-Colonel H. Cocks to May 11th and Captain T. Biggam to May 17th, 1907. Lieutenant-Colonel M. W. O'Keeffe has been posted to the 4th (Quetta) Division; Lieutenant-Colonel S. Westcott to the 5th (Mhow) Division; Captain J. S. Gallie to the 6th (Poona) Division; Captain E. W. Powell to the 6th (Poona) Division; and Lieutenant M. J. Cromie to the 5th (Mhow) Division. Lieutenant-Colonel C. T. Blackwell has been transferred from the 4th (Quetta) Division to the 6th (Poona) Division; Lieutenant-Colonel A. Kennedy from the 6th (Poona) Division to the 5th (Mhow) Division; Lieutenant-Colonel J. J. O'Donnell from the 5th (Mhow) Division to the 6th (Poona) Division; Lieutenant-Colonel F. R. Newland from the 6th (Poona) Division to the 5th (Mhow) Division; Major R. C. Thacker from the Aden Brigade to the 4th (Quetta) Division; Major F. G. Faichnie from the 5th (Mhow) Division to the Aden Brigade; Captain T. Biggam from the Aden Brigade to the 6th (Poona) Division; Captain M. F. Foulds from the 6th (Poona) Division to the Aden Brigade; and Lieutenant F. J. Turner from the Aden Brigade to the 4th (Quetta) Division.

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 1st Cinque Ports: Surgeon-Lieutenant J. W. Harrisson resigns his commission (dated Jan. 1st, 1907).

Rifle: 1st Volunteer Battalion the East Lancashire Regiment: Howard Henry to be Surgeon-Lieutenant (dated

Jan. 21st, 1907). 4th Volunteer Battalion the Durham Light Infantry: The undermentioned to be Second Lieutenant: Ernest George Dryden Benson (late Surgeon-Lieutenant) (dated Jan. 15th, 1907).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

London District: London Companies: Harold Arthur Thomas Fairbank to be Lieutenant (dated March 1st, 1907).

INDIAN MEDICAL ARRANGEMENTS.

The *Standard* of March 25th states that "Lord Kitchener has decided to reorganise the paid appointments to staff surgeoncies and hospitals among officers of the Royal Army Medical Corps and those of the Indian Medical Service. The establishments will be altered to secure better coördination and working, especially in the north, and the new allotment comes into force on Monday next."

THE NEW ARMY SCHEME.

Mr. Haldane is indefatigable in his endeavours to render his new schemes for the creation of a really national army a success. For this purpose he knows a territorial army to be absolutely essential and that everything turns upon the willingness of the nation to provide it. The question yet to be answered experimentally is whether the number of men required will be forthcoming. The subject has a hygienic and physical health side to it of a very important kind upon which we have previously commented. Mr. Haldane concluded his recent speech at the Guildhall, when he distributed the prizes to a cadet battalion of the King's Royal Rifle Corps, by taking up a position for which we have always contended. "Could anyone look upon a first-rate cadet corps without feeling that every young man in it was better and stronger morally and mentally for the discipline to which he had voluntarily subjected himself? It helped him in life, it helped him in his employment; it helped him to be a better citizen, and fitted him not only for military but civilian duties. From every point of view the cadet corps was a thing to be encouraged in the interests of the nation."

Correspondence.

"Audi alteram partem."

SLEEPING SICKNESS ON THE LUALABA RIVER, CENTRAL AFRICA.

To the Editors of THE LANCET.

SIRS,—Early in the year 1905 Dr. Dutton and Dr. Todd visited the Upper Congo as far as 6° S. Lat. In their valuable report[1] they give Buli as the most southern point of infection on the Upper Congo. Buli is on the Lualaba river, 60 miles south of Kasongo and about 5° 30′ S. Lat. Some native porters from Lake Kasali, 200 miles farther south, were examined but no indications of sleeping sickness were evinced. It was supposed, therefore, that the disease at that time had not extended farther south on the Lualaba than Buli.

In August of last year I received a communication from Mr. J. H. Hayes, who was travelling from Lake Kasali southward for 100 miles, stating that the Baluba people in the villages along the Lualaba appeared to be dying in increased numbers and from a disease quite unknown to the people themselves. He believed that it might be sleeping sickness as some of them evinced those symptoms. In October I proceeded to this district on a tour of investigation. At Wundwi, which is a short distance below the Kalenge Rapids on the Lualaba River, and about 100 miles south of Lake Kasali, I found by microscopic examination of cervical gland fluid that 70 per cent. of those examined were infected with trypanosomes. Adults and children alike were infected. The women and children were probably more commonly infected than the men. The old people seemed to be more or less free. These proportions as to age applied to all the villages visited.

At the Congo Post of Bukama, of 45 soldiers from all parts of the Congo State, ten were shown to harbour the organisms in their cervical glands. Of 20 workers from the surrounding district five were infected. At Tengalonzi, opposite the Post, of 50 examined 40 showed unmistakable glands by palpation and eight had enlarged glands but not so characteristic. At Pengi 30 out of 50 were found with enlarged glands. At Lambula 25 out of 35 were with enlarged cervical glands. At Karu on Lake Kavele, 15 miles west of the Lualaba, I found 20 per cent. of the people with typical glands. The examination of 129 carriers from Lake Kasali showed 11 per cent. to be infected.

The conclusion to be drawn from these observations is that the district is heavily infected. After removing all apparent sources of error it appears on a conservative estimate that at least between 40 and 50 per cent. of the inhabitants have trypanosomiasis. This represents a slightly heavier infection than Dr. Dutton and Dr. Todd found in the districts 200 miles north of this. As before mentioned, the natives themselves recognise sleeping sickness as a new disease. It was also noted above that Dr. Todd had examined at Cabinda two years ago a number of porters from Lake Kasali, but he failed to find in them any indication of trypanosomiasis. It seems, therefore, probable that the disease was not introduced earlier than three years ago at the longest. Dr. Todd mentions that the disease was first noticed at Cabinda in 1900. The mode of introduction seems evident. The Lake Kasali people have for some years carried on an extensive trade in dried fish with Cabinda, 200 miles north. They catch the fish, dry it, and carry it to Cabinda, where they find a ready sale. These carriers have contracted the disease at Cabinda and have been the means of infection on Lake Kasali and the River Lualaba to the south. That it has been introduced in any other way seems improbable, as the Kasali people do not visit any other possible source of infection.

This is the first year that the natives have noticed an increased mortality in their villages. Moreover, they have observed that this increase is only in the villages along the river. Hence, quite on their own initiative they are beginning to move their villages to locations inland. The southern limit of the disease at present seems to be the Kalenge Rapids, about 9° 15′ S. Lat. That the disease has not already spread farther south is no doubt due to the fact that the people below the Rapids have practically no intercourse with those above.

The glossina palpalis.—The fly was noticed all along the river where the disease was prevalent. It has also been found at the following places which are as yet free from infection. At the junction of Lufupa and Lualaba rivers; on the Mukulelihi river at about 10° 40′ S. Lat.; on the west side of Lake Mwera; at the junction of the Dikulwe with the Lufira river; on the South Kaluli river; on the Luapula river, 10° 29′ S. Lat. (Mr. Arthur Pearson); and on the Fwalondesi river. Active measures are being taken to prevent the spread of the disease southward. Posts of inspection are established on the main trade routes and it is believed that much can be done to stay its progress. At least its advance can be much delayed, possibly until such time as a cure may be discovered.

I am, Sirs, yours faithfully,

A. YALE MASSEY, B.A., M.D. Tor.,
Medical Officer, Tanganyika Concessions, Limited, Central Africa.

Ruwe, Congo Free State, Jan. 22nd, 1907.

[1] Memoir xvii., the Liverpool School of Tropical Medicine, March, 1906.

ALBINISM IN MAN.

To the Editors of THE LANCET.

SIRS,—On looking into the various hereditary conditions which affect man for one which would lend itself to the application of Mendelian methods of investigation that of albinism appealed to me as the most suitable for my purposes. The condition is a striking one, such as may reasonably be expected to impress even the most casual observer, and its occurrence at any time in a family would be a circumstance not likely to be soon forgotten. No estimate that I know of has yet been made as to the frequency with which it occurs in the general population, but it is at least sufficiently common to provide satisfactory data for work such as this.

The condition in itself does not call for description for purposes of identification, but when dealing with a subject about which so little is known it may be as well to venture on a description of what I take to be the type. In the first place, then, in the typical human albino the skin is of a uniform milky colour, except in those parts where the epidermis is thin, allowing the vessels underneath to show through in a highly characteristic manner. The hair system

of the whole body, being devoid of pigment, is of a silvery-white colour, though often when viewed in bulk a pale-straw hue is apparent. But the most striking change is seen in the eyes. There the rays of light diffuse through iris as well as pupil, giving to the latter the red appearance familiar through the mirror of the ophthalmoscope, and to the former a rose-pink hue derived from the vessels of the choroid and of the iris itself. The photophobia which results from the relative non-absorption of the rays of light leads to a habit in the albino of continually screwing together his lids in order to admit only the minimum of rays essential to sight, and this, in conjunction with the characters already mentioned, forms a picture which makes what I am in the habit of calling the *albinotic facies* a distinctly characteristic one.

Probably the varieties of this condition are more numerous than we suspect. Among the coloured races, in whom the condition is much more common, a piebald variety is often found for which the name of *partial albinism* seems as good as any. When one of these patches of congenital leucoderma exists in the situation from which the eyes are developed true albinotic eyes are found as a result, and similarly when a patch involves the scalp or other portion of the hair system the hair in that situation partakes of all the characters of true albinotic hair. For some time I have been strongly of opinion that a like condition occurs among Europeans, only masked by the already white colour of the great part of their skin. In some cases observed the hair has been pigmented, as in that described by Folker, while the rest of the body showed the usual features associated with albinism; in others, again, the only indications of albinism at all have been the characters of the eyes, which were in every respect those of an albino. In still other cases eyes and skin have been apparently normal, while the hair of the scalp has been congenitally white. I have never been able to satisfy myself that in these instances there were any corresponding differences to be noted on the skin, but the condition is bound to include many varieties, and I should be greatly obliged if physicians who have the opportunity of doing so would kindly endeavour to come to a decision on this interesting point.

I have thus briefly described the typical appearances presented by an albino, and some of the varieties which have been observed because it is important in examining such cases that one should have a standard to go by, the deviations from which should be carefully noted. For this reason I have chosen my adjectives with care as representing what to my mind is the type of the condition. And in closing I venture to ask the aid of those medical men who may happen to meet with such cases of albinism or of any of its varieties in the pursuit of their profession, that they may be good enough to help me to get into communication with the individuals they come across with a view to obtain the particulars of their family histories, assuring them that from all those who are good enough in this way to supply me with cases I shall feel myself the recipient of considerable personal favour.

I am, Sirs, yours faithfully,

A. R. GUNN.

Physiological Department, University of Edinburgh, March 16th, 1907.

VACCINATION AND THE LONDON COUNTY COUNCIL ELECTION.

To the Editors of THE LANCET.

SIRS,—Before the recent election the *Vaccination Inquirer* published answers received from 61 candidates in reply to a circular sent out by the National Antivaccination League. Candidates were asked definitely if they were in favour of abolishing the vaccination test for teachers and others who "honestly believe" vaccination to be injurious to health or unnecessary.

Since the election I have made an analysis which shows how the 61 candidates fared. 24 replied in the affirmative without definitely indicating whether they were pro- or anti-vaccinists, merely assenting to the principle of conscientious objection in their answers; of these nine were elected and 15 defeated. 26 declared themselves definitely pronounced anti-vaccinists; of these two were elected and 24 defeated. 11 declared themselves pro-vaccinists; of these eight were elected and three defeated.

These results must be very disappointing to the officials of the National Antivaccination League. Having regard to the declaration of the editor of the *Vaccination Inquirer* that "the occasion is one of the greatest importance to our cause," the blow must be rather disconcerting. One candidate evidently regarding his election an absolute certainty answered: "I shall certainly vote in the manner desired by the league." He was defeated. Another candidate answers: "I will not; I am convinced of the necessity of vaccination." He was at the head of the poll.

I am, Sirs, yours faithfully,

ARTHUR DRURY, M B., C.M. Edin.

Halifax, March 25th, 1907.

ON THE CONDITION OF THE BLOOD-VESSELS DURING SHOCK.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 23rd, Dr. Leonard Williams stated an argument in which he invited me to find a fallacy, and with your permission I will point out two. Assuming the cardiac power to be constant, Dr. Williams said that when the vessels contracted the blood pressure rose and when they dilated the blood pressure fell. He asserted that the blood pressure in shock was invariably subnormal in any vessel in which it could be measured by the sphygmanometer. He concluded that "the only possible deduction from these elementary facts is that the general state of the blood-vessels in shock is that of dilatation."[1]

The first fallacy I would mention is that Dr. Williams omitted to say that the blood pressure is raised in the splenic vein in shock and he did not show why the deduction should not be arrived at that because of this rise of blood pressure the general state of the vessels must be one of contraction. Another most obvious fallacy in the argument is that the fall of blood pressure might be due to a dilatation of vessels which was not general but local. If Dr. Williams had remembered that it has been taught for many years that the vascular changes in shock are due to a paralysis of the vessels in the splanchnic area he would, I think, have worded his argument differently.

I have already fully discussed these points in my papers, which you have been good enough to publish.

I am, Sirs, yours faithfully,

Portman-street, W., March 25th, 1907. JOHN D. MALCOLM.

MEDICAL LAW AND LIMITED COMPANIES.

To the Editors of THE LANCET.

SIRS,—In view of the publicity given to recent cases of evasion of the Medical and Dental Acts the following facts may show the need for amended legislation. A short time ago a patient came to me offering to apprentice his son with a view to his *practising* dentistry. When I inquired what hospital he would join the father said: "Hospital? I shall not waste my money in fees nor my son's time when he can practise equally well without as long as he does not call himself a dentist." So I refused to take the premium or have anything to do with the case. No less than seven unregistered men have begun dental practice here in the last three years. It is useless to say that anyone can prosecute, for you cannot obtain evidence without laying a "trap," and this is obnoxious to most Englishmen and prejudices the jury in favour of the defendant. If limited companies are to be tolerated, then they should be compelled to employ only registered men in the interests of the public. For to the man in the street anyone who extracts teeth is a dentist.

I am, Sirs, yours faithfully,

Torquay, March 25th, 1907. L. STRANGWAYS, L.D.S. Eng.

MEDICAL MEN, MOTORS, AND LIGHTING OF VEHICLES.

To the Editors of THE LANCET.

SIRS,—A very important Bill on the "Lighting of Vehicles" has passed the second reading in the House of Commons and has been referred to the Standing Committee on Law; its consideration will come on very shortly. It is very important that this Bill should be amended in order to secure a red light being carried at, or showing at, the rear of every vehicle used on the highways. Members of our own profession are especially interested in such an amendment. Some

[1] THE LANCET, March 23rd, 1907, p. 836.

vehicles, such as furniture vans, very often carry a small light in front placed in such a position that vehicles overtaking them have no warning until they are close on them. The country doctor using his motor in answer to an urgent summons in the night or early hours of the morning runs in constant danger from this cause, and every one of us must at some time or other have had narrow escapes owing to the absence of a light showing to the rear giving warning of a cart in front. Even before it was necessary that the motor-cars should carry a light at the back for the purpose of illuminating the number plate it was compulsory that they should show a red light at the back, and how it could be possible for legislators to pass a Bill compelling the fastest vehicles on the road to show a light at the back to prevent them being run into and yet allow farm carts and furniture vans and the like to use the same road and yet carry no light at the back at all has always been a puzzle to me. It would be a great help in securing such an amendment as I have referred to if all medical motorists in the country would write to the Member of Parliament for their district pointing out the danger run by the doctor who has to be out at all hours of the night. I hope medical men will not treat this matter as though it were one of little concern to themselves. The passing of such an amendment would amply repay every medical man in the country for the small amount of time it would take to pen such a letter.

I am, Sirs, yours faithfully,

H. E. B. BRUCE-PORTER,
Honorary Secretary, Committee of Medical Men using Motors.

Grosvenor-street, W., March 22nd, 1907.

"A DESCENDANT OF HUGH OLDHAM."

To the Editors of THE LANCET.

SIRS,—In referring in your issue of March 16th, p. 765, to the late Mr. C. J. Oldham, F.R.C.S., as a "descendant" of Hugh Oldham, Bishop of Exeter, you are exposing that prelate's memory to a good deal of obloquy. The vow of celibacy was enjoined on the clergy by Pope Hildebrand in or about A.D. 1000, whereas Hugh was not born before 1450 and died in 1520. That he died excommunicate is true, but this was not for a breach of the Papal decree but for a dispute on a building question with the powerful Abbot of Tavistock.

The late Mr. Oldham did not claim to be a descendant, but a "kinsman," of Bishop Hugh; beyond that, if we are to judge by his bequests, he seems to have known little about him. For, though Hugh founded Manchester Grammar School, he was also founder of Netley Abbey, which the will ignores. Again, he founded Corpus Christi College, Oxford, in conjunction with Stephen Fox, Bishop of Winchester; but he was also, with the Bishop of Lincoln, joint founder of Brazenose College, Oxford, which is also ignored. As a matter of fact, no Oldham within the last 200 years ever has been able to prove direct connexion either with Bishop Hugh or with Bishop Richard Oldham, who in the thirteenth century was Abbot of Chester and Bishop of Sodor and Man.

I am, Sirs, yours faithfully,

March 17th, 1907. RALPH S. OLDHAM.

*** Our Manchester Correspondent was in error in using the word "descendant."—ED. L.

TERTIARY SYPHILITIC FEVER.

To the Editors of THE LANCET.

SIRS,—Dr. F. Parkes Weber has done well to draw attention to the occurrence of fever with syphilitic lesions, but I venture to suggest that he has not paid sufficient attention to the main points at issue. It may be true that many syphilitic lesions are accompanied by a varying degree of pyrexia—probably more often than is suspected—owing to the fact that the temperature is rarely taken for any considerable time in cases of syphilis. But this is a point of comparatively slight importance from the clinical point of view.

The importance of *syphilitic fever* (I omit the word "tertiary" because there is no real pathological distinction either in time or nature between the so-called secondary and tertiary lesions) consists mainly in the diagnosis. Fever due to syphilis has been mistaken for typhoid fever, pneumonia, and tuberculous meningitis. Dr. J. D. Rolleston has recently drawn attention to this question with regard to typhoid fever. He has also reported a case in which early syphilitic brain symptoms were mistaken for enteric fever.

Fournier divides syphilitic fever into symptomatic and essential, the former accompanying the outbreak of cutaneous eruptions, &c., the latter independently of them. It is to the latter class that Dr. Parkes Weber refers. Fournier describes a continuous type and an intermittent type, the former of which he designates syphilitic typhose (typhosis). He also points out that such cases of "syphilitic typhosis" may be mistaken for enteric fever, and says that the chief points in which syphilitic typhosis differs from enteric fever are the absence of the characteristic temperature chart of enteric fever, the enlarged spleen, iliac pain, dry, glazed tongue, and delirium. The blood is also negative to Widal's agglutination reaction. It would therefore appear that, however interesting "syphilitic fever" may be from a pathological point of view, its main importance lies in its diagnosis from enteric fever, meningitis, and pneumonia.

I am, Sirs, yours faithfully,

C. F. MARSHALL.

New Cavendish-street, W., March 18th, 1907.

To the Editors of THE LANCET.

SIRS,—It does not appear to be generally known that the occurrence of fever in syphilis was mentioned by some of the earliest writers on the disease. Having recently [1] had occasion to peruse the early literature of syphilis I have thought that the following notes might be of interest to some of your readers. Long before John Hunter,[2] to whom Dr. Parkes Weber alludes in his interesting paper,[3] the syphilographers of the sixteenth century, whose works are contained in the collection of Luisinus, had spoken of the existence of fever in the Morbus Gallicus. According to Fracastor,[4] to whom syphilis owes its name, a slight degree of fever was an occasional though rare event: "Quandoque et febricula quædam concomitabatur, sed raro." Fallopius's words are similar [5]: "Solet aliquando febricula adjungi ob fervorem circa viscera ferventia. Sed hoc raro fit." Petronius wrote to the same effect [6]: "His nunc aberat, nunc adjuncta febris erat." Haschard [7] also speaks of a "lenis febricula" as one of the early symptoms of the disease. Rondelet, the original of Rabelais's Rondibilis, stated that "some after receiving the infection are seized with fevers and falling into profuse sweats part of the venom is discharged thereby." [8]

According to Vigo,[9] fever was a late symptom. "Ultimo loco vidimus febriculam oriri quæ tot prænominatis malis hominem ad ultimum ejus diem conducebat." Ulrich von Hutten,[10] one of the most interesting figures in the history of the Reformation, and himself a sufferer from the new disease, also stated that "phthisis" was a sequel. Ambroise Paré [11] also reckoned fever among the late phenomena: "Autres demeurent asthmatiques et hectiques avec une fièvre lente, et meurent tabides et desseichez." Brassavolus [12] took a less serious view of protracted fever: "Lentæ febres, ac longæ cum morbo Gallico futuræ hecticam minime significant. Infinitos enim vidi, qui in tales incidere febres ... tamen hectici non evasere, imo Gallico affectu curato, et etiam per existentia, febris ipsa una curata est, ac abivit." Of subsequent writers prior to John Hunter, Daniel Turner deserves special mention. In his work on syphilis which seems to have fallen into ill-merited oblivion numerous references are made to the existence of fever in syphilis.[13] Then, as now, patients supposed to be suffering with phthisis were really the subjects of venereal infection, and when almost reduced to the last extremity owed their salvation to a correct diagnosis and the exhibition of mercury.

How hopeful a view Turner took of syphilitic fever is well shown by the following quotation: "Of all the several sorts of consumptions ..... I should more willingly encounter the

[1] Medical Press and Circular, March 20th, 1907, in which I have recorded two cases of syphilis simulating typhoid fever.
[2] A Treatise on the Venereal Disease, first edition, 1786, p. 300.
[3] THE LANCET, March 16th, 1907, p. 728.
[4] Luisinus: Aphrodisiacus sive de Lue Venerea continens omnia quæcunque de hac re sunt ab omnibus medicis conscripta, Lug. Bat., 1728, p. 199.
[5] Ibid., p. 780. [6] Ibid., p. 325. [7] Ibid., p. 950.
[8] Daniel Turner: Aphrodisiacus, 1736 (abridged English version of Luisinus).
[9] Ibid., p. 450. [10] Ibid., p. 279.
[11] Œuvres, Lyon, 1641, p. 444.
[12] Luisinus, loc. cit., p. 676.
[13] A Practical Dissertation on the Venereal Disease, 1724, pp. 261, 267, 278, 304.

venereal than any of the rest, where the Distemper especially had been overlook'd and the Body before unacquainted with the antidote, I mean any mercurial preparation ..... Where one Person is carried off by a pocky Hectick ..... we have twenty, I might say forty, melted down or dry'd away by those of another nature."[14] The celebrated Astruc,[15] Turner's contemporary, noted "intermitting and slow Fevers among the Disorders of the general Functions in Pocky Persons. ..... Slow fevers most commonly arise from violent Pains, from Ulcers of various Parts, from Gummata, from the Putrefaction of Nodes or Exostoses, from internal Abscesses, &c.; all of which constantly happen in an inveterate Pox." Of writers later than John Hunter but prior to Wunderlich, Swediaur[16] and Bassereau[17] in France and Erasmus Wilson[18] in this country should be mentioned. Swediaur states that a kind of slow fever with a weak and accelerated pulse often precedes the appearance of ulcers in the throat and the cutaneous eruption. He also deals with syphilitic phthisis, in which he says the emaciation is generally unaccompanied by fever, but hectic fever is sometimes present. Bassereau had frequently seen febrile attacks in the syphilitic closely resembling a double tertian.

Whether the early writers were correct in attributing fever in each case to syphilis is a matter now impossible to decide. Fournier,[19] though justly appreciative of their work, admits that they were often unduly credulous and attributed certain morbid states to venereal infection on most inadequate and puerile grounds. Enough, however, has been said to show that the occurrence of fever in syphilis, both at an early and late stage of the disease, and the resemblance of the fever to that of tuberculosis or malaria were recognised long before the introduction of the clinical thermometer.

I am, Sirs, yours faithfully,

J. D. ROLLESTON.

Grove Fever Hospital, S.W., March 16th, 1907.

THE DETECTION OF ACETONE IN THE URINE.

To the Editors of THE LANCET.

SIRS,—A ring test, essentially the same as that described in THE LANCET of March 23rd, 1907, p. 805, and on which you comment with approval in an annotation on p. 824 of the same issue, was published by Von F. Lange in the *Münchener Medicinische Wochenschrift*, No. 36, 1906. In Lange's method 15 cubic centimetres of the urine to be tested are mixed with 0·5 to 1·0 cubic centimetre of glacial acetic acid and a drop of freshly prepared sodium-nitroprusside solution. A cubic centimetre of strong ammonia is then run on to the surface and in the presence of acetone a more or less intense violet ring appears at the line of contact, the depth of the colour and the width of the ring varying with the quantity of acetone present in the urine. By this method it is said that $\frac{1}{100}$th per cent. of acetone can be detected, and it has certainly proved in my hands a most delicate and reliable test.

I am, Sirs, yours faithfully,

Beaumont-street, W., March 22nd, 1907. P. J. CAMMIDGE.

CENTRES OF MORAL INFECTION.

To the Editors of THE LANCET.

SIRS,—From time to time I, and I have no doubt you, Sirs, and others have been appalled at the filthiness of writings and scratchings in the old-fashioned public conveniences for men. I write with, fresh in my mind, a horrible—shall I term it Ottoman?—sketch which I have just seen, and which everybody visiting the place had to see, in a convenience near the north-west corner of the Kensington Gardens. This is a place which must be constantly visited by boys and lads playing in the gardens. It is impossible to overestimate the harm which may be done to them by such designs. Now, the modern County Council conveniences provided at centres of traffic are gradually rendering these old iron plague spots in isolated places unnecessary, and it is greatly to be hoped, for the moral welfare of the people, that as they become unnecessary they may be abolished. At the best they are abominations. At the present time a new convenience is, I believe, being provided in the Bayswater-road a couple of hundred yards to the east of the filthy place which I have more specially indicated, and it is greatly to be hoped that H.M. Park Commissioners will at the earliest moment abolish the old iron filth disseminator and plant decent grass on its site.

I am, Sirs, yours faithfully,

A MEMBER OF TWO HOSPITAL COMMITTEES.

London, March 21st, 1907.

[14] Ibid., pp. 120–121.
[15] Treatise of the Venereal Disease, English Translation, 1754, vol. ii., p. 30.
[16] Traité des Maladies Syphilitiques, 1801, pp. 102 and 168.
[17] Affections Syphilitiques de la Peau, 1852, p. 166.
[18] Diseases of the Skin, fifth edition, 1863, p. 416.
[19] Gazette Hebdomadaire, 1875, p. 758.

THE ORGANISATION OF THE MEDICAL PROFESSION IN FRANCE.

(FROM OUR SPECIAL COMMISSIONER.)

The Twenty-fifth Anniversary of the First French Medical Union.—8000 out of 20,000 Medical Men in Union.—The Parliamentary Medical Group.—£20,000 Saved in Paris Alone.

Paris, March 15th.

THE medical unions of France have now been in existence over a quarter of a century. Last year a festival was held to celebrate what was called the "silver wedding" of the union of medical men. Strange to say, this movement did not originate in Paris or one of the great progressive centres, but on the contrary in one of the most reactionary and least enlightened parts of France—namely, La Vendée. It is true that so far back as the year 1879 a medical practitioner of Havre, Dr. Margueritte, wrote to the late Dr. Auguste Cézilly, who had just founded the Concours Médical, protesting that barristers, solicitors, and others were forming unions to defend their professional interests, but that medical men remained listless and disorganised. This letter was the beginning of a prolonged discussion. Many different opinions were expressed and several medical men wrote in opposition, saying that a medical union, if formed, would soon become the instrument of some coterie or party and would promote the interests of a selected group to the disadvantage of all the other practitioners. At last the Concours Médical appointed a special committee to investigate the whole question. While these debates and discussions were proceeding, in the far-off country district of the Vendée a few practical men actually did what others were merely talking about. It was on March 6th, 1881, that the rules of the Medical Syndicate of Montaigu were definitely adopted and thus the first union of French medical men came into existence. On May 16th following this syndicate held its first official meeting.

Montaigu is a little town of only about 1800 inhabitants and is situated on the banks of the Maine, which is an affluent of the Sèvre-Nantaise in the Bocage Vendéen. This town, though small, has a history. It was strongly fortified by Louis XI. It has often been besieged and sacked in turn by the Protestant and by the Roman Catholic armies during the wars of religion. Then more recently it was again taken and retaken by the Republicans and the Royalists during the insurrection of the Vendée. Now there remain but a portion of the dungeon and deep trenches where the walls overlooked the moat. Yet the fighting instinct of the place is not extinct. There is no longer war between rival creeds or rival political systems, but here medical men were first brigaded to undertake an economic war in defence of the professional dignity and their material well-being. Dr. Gustave Mignen was their leader and he contrived to gather together in this small place no less than 40 practitioners, some of them coming from the neighbouring department of the Loire-Inférieure. Dr. Mignen was born in this little place on Dec. 8th, 1848, and belongs to a well-known family of La Vendée. He received his medical education at Nantes and at Paris, terminating his studies in 1873. He at once went to practise in his native town. Before the great Revolution the Faculty of Medicine was a very close corporation, of very jealous disposition, and not well disposed towards innovations; but all ideas of monopoly were swept away by the Revolution. The Empire reorganised the schools of medicine, though it was as opposed to the formation of unions among medical men as it was to all forms of independent organisation. Therefore, when Dr. Mignen began to practise he found the medical profession in a very anarchical condition. There was no rule of conduct, no government within the ranks of the profession, everyone was for himself "and the devil

take the hindmost." Under the Empire the State always feared the coming into existence of any organisation that might dispute its absolute authority. The most that could be attempted was the formation of a few benefit or mutual insurance societies. However, the Empire fell in 1870, and as the French nation began to recover from the disasters of the war a new and more independent spirit developed under the Third Republic. No sooner had Dr. Mignen formed this union between his neighbouring 40 rural practitioners than the spirit of rivalry between them died away. Instead of competing they helped each other. They agreed on a uniform tariff in regard to their fees and determined not to allow themselves to be exploited by benefit societies or by insurance companies. Soon the example spread. A medical union was formed at Pouzanges, then at Challanges and other places, and after a while all these local unions united and constituted the formidable Syndicate of the Medical Practitioners of the Department of the Vendée.

From the very beginning, however, Dr. Mignen understood that in a country like France, where everything is centralised, mere local effort would not suffice. Therefore he communicated with the Concours Médical and was appointed on a committee, with Dr. Barat-Dulaurier of the Dordogne, Dr. Marguerite of Havre and Dr. E. Noir of Brioude, who were now all striving to form medical unions in their respective localities. This was the nucleus which, after the enactment of the law of 1884 authorising the creation of professional and trade unions, advocated, and finally brought into existence the Union of the Medical Syndicates of France. To-day this federation of local unions consists of 80 different syndicates, having about 5500 members. But there are, all included, 157 medical unions with about 8000 members, only many of them are not affiliated to the central union or federation. According to the last published estimate there are 3815 medical men in Paris and 15,189 in the departments. Then there are 470 practitioners in Algeria and 105 in the other colonies, in all 19,579 medical men, and there are also 985 *officiers de santé*, a lower form of qualification which is no longer accorded. Thus, in round numbers, it may be said that there are 20,000 medical practitioners and that 8000 of them are in union. This is a very high proportion and speaks well for the spirit of organisation of the French members of the profession. The income of the national federation is more than sufficient, amounting to nearly £1000 per annum and last year it was able to invest £152. Such is the present position of affairs as shown by figures, and to celebrate this success a gathering and a banquet took place at Montaigu on May 16th, the twenty-fifth anniversary of the commencement of the movement. From all parts of France medical men came, as it were, on a pilgrimage, to visit the cradle of their medical unions and to render personal homage to Dr. Gustave Mignen and the premier medical syndicate of France. Then, later, during the month of November last, when the general assembly of the Union of the Medical Syndicates of France met in Paris, Dr. Mignen was invited to preside. He had then the pleasure of hearing reports relating the practical results attained; among these was the establishment of an official tariff of fees to be paid under what in England would be called the Employers' Liability Act.

At first the law for compensating workmen in cases of accidents worked badly so far as the interests of the medical profession were concerned. The employers resorted to insurance companies which engaged the service of medical men at fixed salaries. The medical attendant was often accused of acting in the interest of his employers. He could do this by allowing the injured workman to return too soon to his work or by drawing up such medical certificates as tended to make the injury appear less grave. This would reduce the amount of compensation to be given by the insurance company that employed the medical man. But if injured workmen complained of the medical practitioner the latter had good cause to complain of the working men, of their employers, and of the State and its laws. A number of laws had been enacted which are described as laws "of social solidarity"—namely, laws increasing the responsibility of society as a whole towards such members of society as suffer special disadvantages or misfortunes. The compensation for labour accidents was a notable example of such legislation. But in all this the position of the medical practitioners had been entirely overlooked and while the law was endeavouring to give special assistance to large sections of the community, the members of the medical profession were threatened with a considerable reduction in their incomes. Fortunately, the parliamentary medical group remains intact. Not even the fierce quarrels engendered by the Dreyfus affair were able to break up this admirable organisation. All medical men, whether they be senators or deputies, and whatever the political party to which they belong, form part of the parliamentary group. When a Bill is introduced affecting the medical profession these political adversaries meet on the friendliest terms and discuss the proposed measure from the point of view of their profession. They at once saw that the law on accidents might be used by various organisations such as insurance companies to compel the victims of accidents to place themselves under the care of medical men specially engaged and probably badly paid for that purpose. Already in 1898 the parliamentary medical group succeeded in getting a clause added to the Bill which stipulated that any injured workman was free to select whatever medical attendant he might prefer.

The adoption of a clause reserving for the patient the right to choose his medical adviser established an important principle, but it did not suffice to secure its practical application. The insurance companies set up dispensaries near important works and in centres where accidents often happen. The employers on their side exercised pressure on their workmen. The workmen were free to do as they pleased but the employers were also free to discharge them. Thus it simply amounted to this, that the workmen were made to understand that if they did not employ their master's medical man then their master would not employ them. The purport of the law was therefore easily defeated. Moreover, the object of the medical unions was likewise set aside. The unions strive to maintain the dignity, independence, and impartiality of the medical profession. But here were medical men induced to sacrifice their independence and impartiality for the sake of the regular salaries offered them by the insurance companies. Fortunately, in 1904 the law was to be revised and the parliamentary medical group set to work again. This time they won over the Senate and the revised law of 1904 contains an additional clause imposing fines and punishments on employers and others who in any way, by threats or otherwise, interfere with the workman's free choice of the medical practitioner. The freedom of the worker is thus at last insured and since then he has been practically as well as theoretically able to choose his own medical attendant. The result is that the members of the medical unions have much more work while the medical men in the service of the insurance companies find their employment well-nigh gone.

Nor is this all. Not only have the independent members of the profession won back their patients, but they have advantageously settled the vexed question of fees. Thanks again to the activity of the parliamentary group an official commission was appointed to study the matter and to draw up a tariff of charges. This commission consisted of three delegates of the medical unions, and of delegates of the unions of dispensing chemists, of the employers' unions, of the workmen's unions, and of the insurance companies. In a word, the commission comprised representatives of all the interested parties. Three different tariffs were drawn up. One applies to rural districts, another to small towns, and the third to the large towns. The smallest sum to be paid for a visit is 1 franc 50 centimes; the highest, that is in Paris, 2 francs 50 centimes, or 2*s*. Of course, this does not include medicine, for French medical practitioners do not dispense. Then there is a very long and complicated tariff for all minor and major surgical operations.

What this means is best set forth by the estimate made by the union of the Paris medical practitioners. After patient and long inquiry they are now convinced that this alteration in the law has increased the income of the Parisian medical practitioners who attend injured workmen to the extent of £20,000 per annum. This is certainly a very substantial result and amply demonstrates the utility of forming medical unions.

(To be continued.)

CLERICAL AND MEDICAL GOLF MATCH.—A golf match took place at Burnham on March 19th between teams representing the clerical and medical professions of Bristol and Clifton. A high wind rendered play difficult, but the clergy eventually won easily.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Cost of Pauper Lunatics.

WHETHER the apparent increase of insanity be real or the result of increased publicity and greater care for the safety and comfort of the insane there is no doubt as to the serious increase of cost under which the ratepayers are beginning to groan. The deputation on March 10th to the Home Secretary from the Lancashire asylums boards and boards of guardians in the county of Lancaster on the subject of the provision for pauper lunatics was perfectly justified, though no immediate results seem likely to appear. All are agreed that during the last 20 years the expenditure has largely increased, while there seems to be no proportionate increase of cures. And it will be agreed by those who consider the real requirements of the majority of the cases of chronic insanity, that although their surroundings should be airy, bright, and cheerful, several members of the deputation were right in urging that they thought that less costly buildings and less costly maintenance might suffice for chronic cases. No doubt several influences have been at work in causing what may be called extravagance in the building and arrangements of some of our pauper asylums. One of these is the very common one that those who are responsible consider that they should have a structure worthy of the conspicuous position usually occupied by asylums. This has often been illustrated in Manchester in the public buildings erected by the corporation, very notably in some of the palatial baths that were to be "worthy of the city." But why the evidence of so much insanity in our midst should be blazoned forth in this way is not very clear to the sane mind. Then, too, as is quite natural, architects, ambitious, of course, of erecting something that will strike the public eye, may often unconsciously, and sometimes perhaps even consciously, lead authorities into expenditure not really required. The chief necessities are air, light, and good ventilation, which can be provided without elaborate decoration, and good design as to form need not be specially expensive. The Home Secretary evidently sympathised with the deputation in the desire for economy and it is to be hoped that efforts in that direction will be more successful in the future than they have been in the past.

Dangers of Drinking in the Dark.

A pitiful case of accidental poisoning took place at Blackburn on March 20th. A wholesale druggist was cleaning some silver ware in a small conservatory connected with the scullery with cyanide of potassium, which he had in a teacup. He went out to find a silver matchbox to clean, leaving the cup containing the poison on the table, and turning down the light in the scullery, which was the only one that gave light in the conservatory. During his absence his wife went into the scullery to take some pills. She picked up the cup and did not notice anything in it as the place was dark. She drew water from the tap, took a drink from the cup, and then ran into the sitting room calling to her husband, "There is something in that cup," and died almost immediately, before a medical man who was next door could get to her. It is not of much use, perhaps, to moralise on the dangers surrounding those of us who deal in this careless, irresponsible fashion with deadly weapons of any kind, and yet it does not seem right to pass such cases by in silence. The whole history of the case shows a want of appreciation of the danger of leaving a deadly poison in a dark or very dimly lighted room that is almost incredible, and the drinking of this poor woman's fatal draught from a cup which she could only see imperfectly is almost equally incomprehensible. The story points its own moral and, as the coroner said, shows "how very careful people should be when using any sort of deadly poison."

Death from Ptomaine Poisoning.

One of those unfortunate cases of ptomaine poisoning was inquired into by the Manchester city coroner about a fortnight since. In this case the fatal result was due to eating tinned salmon. Five members of the family and a friend had some of the salmon, which had been bought on the same day. Four of them were taken ill and one little girl died after a week's illness. The shopkeeper said that the salmon had been in stock for three months, which was not considered a long time. They might be kept for years and still be all right. So many of these cases occur, and the difficulty of discovering whether the contents of the tin that is opened will serve as wholesome food or be the messenger of death should surely be reason enough to incite the men of science to further and closer investigation, so that if possible the unscientific person may be able to detect the dangers of tinned meat before it is too late.

Death from Anthrax.

An inquest was concluded in Salford on March 19th as to the death of a seaman at the Salford Royal Hospital. Mr. W. F. Dearden of the port sanitary authority and Professor S. Delépine found anthrax bacilli in the body. The man was employed on a vessel which carried cattle and during the voyage one of the beasts died and he helped to throw the carcass overboard. The supposition is that he went immediately and shaved himself (it was on a Sunday morning) without washing his hands. In that way, if the animal suffered from anthrax, the germs might easily be conveyed to his own body.

Accrington Hospital Extension.

Accrington has decided to add a new block to the Accrington and District Victoria Hospital. It is to cost £10,000, towards which sum £3000 or more have already been promised. The need for extension is said to be pressing, for the hospital is increasingly useful and the demands on its services continue to grow.

Waste of Infant Life.

At an inquest held about a fortnight since at Blackburn on a baby six months old the mother said she had three children living and had lost seven by death. Only one had lived to be six years old, the others ranged from six months old to a year and three months. The verdict was "death from natural causes, accelerated by neglect in not calling in a medical attendant." The foreman of the jury thought that parents in such cases ought to be seriously dealt with. "It was ridiculous that a child of that age should weigh only five pounds five ounces." It is not wonderful that so many children die, the marvel is that so many live.

Meat Inspection.

Even if the very active trade carried on by the "slink butchers" is put aside there is good reason for a careful inspection of meat. The Manchester corporation, therefore, must be commended for appointing two young veterinary surgeons as meat inspectors. The salary in each case is £150 a year.

March 26th.

LEEDS.

(FROM OUR OWN CORRESPONDENT.)

The General Infirmary at Leeds.

UNDER the chairmanship of the treasurer, Mr. Charles Lupton, the 139th annual meeting of the supporters of the largest of the Leeds charities was held on March 21st. In this column on Jan. 26th an abstract was given of the statistics for the year 1906, the period covered by the annual report, which was taken as read at the meeting. Commenting on the increase of work in all departments of the infirmary, the treasurer directed particular attention to the increase in the amount of abdominal surgery done during the last 20 years. In 1882 there were only 25 abdominal sections performed, and of these ten resulted in the death of the patient. In 1905 there were 504 operations of the class performed; of these, 398 were successful, in 17 cases the patients were unrelieved, and death occurred in 89 instances. The mortality had thus decreased from 40 to less than 18 per cent. The statistics of abdominal cases for 1906 had not been worked out, but the number of abdominal sections had increased by 60. Mr. Lupton in the course of his remarks made an interesting reference to the development of open-air treatment, the utility of which had been emphasised in the management of cases of tuberculosis, pointing out that it was now largely employed in the treatment of many more cases of a non-tuberculous character than formerly. This was especially carried out at the semi-convalescent hospitals at Cookridge and during last summer there were seldom fewer than 20 men, women, and children living day and night entirely out of doors, while even in winter there had been 10 or 12 living with great benefit under the same conditions. Even at the infirmary the outdoor treatment was

being developed and there were now two roof shelters in constant use for the children. One of these was in full use last summer and many of the patients spent the whole of their time in this way in the open air. Turning to the question of finance the chairman, who, as all who are connected with the infirmary are aware, has brought to bear on this question keen business faculties coupled with an amount of large-mindedness not always associated therewith, said the weekly board had reason for congratulation that some success had attended its efforts towards economy. In 1905 there was a reduction in ordinary working expenditure of £400 and in 1906, notwithstanding an increase of four in the number of occupied beds, there was again a decrease of £410. He considered that this was due in part to a diminution in the cost of some of the articles consumed, but he credited the staff of the infirmary with some share in bringing the result about. The total expenditure for the year 1906 at the infirmary and at the two semi-convalescent hospitals had amounted to £35,044. It was true that this included a sum of £1717, which might be regarded as extraordinary expenditure, but he did not consider "extraordinary" expenditure should be regarded as a source of expenditure unlikely to recur. Of this sum £472 had been devoted to the addition to the clinical laboratory. The receipts for the year amounted to £30,814, or £4200 below the expenditure, but he was not discouraged by an examination of the details of the income. There had been, indeed, a slight decrease in the amount of the annual subscriptions and legacies amounted to only £1129, but the subscription from the Leeds Workpeople's Hospital Fund was £5250, which was the largest sum ever received from that source. The subscriptions from workpeople outside the city had also increased and amounted to £1439, while the infirmary received about £1000 more from this class through demonstrations and galas which they promoted in the towns and villages round about. Two beds and one cot had been endowed during the year by donations amounting to £2500. Among the factors which have contributed to the more economical working of the charity during the last few years must be included the systematising of the accounts which has been carried out by Mr. Blair, the general manager, and his staff, under the direction and at the instigation of Mr. Lupton. As a result of this there is circulated every month a large sheet showing not only the daily average number of beds occupied and the average cost per bed occupied but the amount actually expended in connexion with every ward in the infirmary, in the theatres, and in the various out-patient departments. Such sources of expenditure as provisions, dressings, drugs, massage, nurses' salaries, including that of extra nurses engaged, thermometers, glass urinals, &c., are all separately dealt with and the sheet enables one at a glance to see where undue expenditure appears to be going on and cannot fail to lead to a wise economy. In Leeds it is happily the rule that every member of the honorary staff of the infirmary is a member of the board of management and in consequence of this it has been possible to institute a rule, excellent in its intention and fruitful in its results, which it might have been otherwise difficult to introduce without misunderstanding. This rule involves the sending to every member of the staff a monthly, or in some cases a weekly, statement of the number of patients under his care who have been in the infirmary more than eight weeks, of those who are having massage or any specially expensive form of treatment, whether medicinal or surgical, and of those who are having stimulants. The members of the honorary staff would be the first to admit that extras ordered in suitable cases are occasionally through inadvertence continued when the necessity for them has ceased to exist. As showing the importance of apparently small economics Mr. Lupton in his address mentioned that the expenditure of 1*d*. more per head on one of the meals which was daily supplied to their patients, nurses, and staff servants, involved an increase of £1000 per annum.

Institution of Separate Professorships of Zoology and Botany at the University.

Consequent on the resignation of Professor Miall, who has occupied the chair of biology since the inception of the Yorkshire College in the early "seventies," the conditions of the teaching in the two subjects of zoology and botany have been fully discussed and at the last meeting of the council of the University it was decided to create separate chairs in the two subjects.

March 25th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Royal Infirmary: New Lady Superintendent of Nurses.

THE managers of the Edinburgh Royal Infirmary have appointed Miss Annie Warren Gill, R.R.C., to be lady superintendent of nurses in succession to Miss Spencer. Miss Gill is at present matron of the Royal Berkshire Hospital, Reading. She was trained in Edinburgh and was for some time night superintendent and for three years assistant superintendent of the Nurses' Home. She was in Africa during the war as matron of the Edinburgh and East of Scotland Hospital; she then returned to Edinburgh but was again sent out to Africa, having been selected by the Government for service in the concentration camps in the Orange River Colony. For her services in South Africa she received the decoration of the Royal Red Cross.

An Important Medico-legal Case.

An important trial has been concluded in Edinburgh which from its medico-legal aspect is worthy of note. The case was known as "The Cumnock Shortbread Poisoning Case." When the man, who was charged with having sent the shortbread, was brought into court for trial it was submitted by the Crown that he was insane and this was supported by two medical certificates. Counsel for the prisoner opposed this view and insisted that the prisoner had consistently maintained his innocence and had instructed his agents and counsel to maintain his innocence. The court decided against the Crown and allowed the trial to proceed. The evidence against the accused was generally regarded as very weak, but the judge in instructing the jury pointed out to them that they had to consider whether the prisoner was insane or not. The jury, instead of returning one of the three ordinary verdicts, decided that the prisoner was insane, with the result that he is detained as a criminal lunatic during the King's pleasure, with the double stigma of insanity and criminality.

Demonstrations on Diseases of the Lower Animals.

At the request of the Faculty of Physicians and Surgeons, Glasgow, it has been arranged that the corporation veterinary surgeon should give a series of demonstrations to medical men on diseases of the lower animals, more especially with reference to those which are transferable to man. In connexion with this subject it is interesting to note that the Incorporated Sanitary Association has also approached the town council of Glasgow. The association is at present considering the questing of instituting an examination for a certificate of competency in inspecting meat and other foods. For such an examination it is necessary that candidates should undergo a course of practical tuition in the various subjects of examination, such as the signs of health and disease in animals, dead or alive, intended for food, the names and situations of the organs in the bodies of animals, the duties of meat inspectors, &c. The association thinks that in the interests of public health the time has arrived when such a course of teaching should be established by the corporation and believes that it would be well supported.

The Royal Hospital for Sick Children, Glasgow.

At the invitation of the Lord Provost a conference of representative citizens was held in the municipal buildings last week to discuss the scheme for the foundation of a new and larger hospital for sick children in Glasgow. The present hospital, situated in Garnethill, contains 74 cots, while at the country branch of the hospital at Drumchapel there are 24 additional cots, making 98 in all. At the present moment there are 140 cases awaiting admission to the hospital, and some idea of the immensity of the work carried on by the institution can be gathered from the fact that during last year alone 11,600 patients were treated at the outdoor department. The present hospital, which was erected in 1882, is unfortunately situated in the centre of a densely populated district and is overshadowed by tall tenements on either hand. The directors have therefore determined, if possible, to erect a larger hospital on a new site in Glasgow and also to extend the branch in the country at Drumchapel. To be at all adequate the new hospital will require to contain from 200 to 250 cots and to erect such a building on a suitable site and make the

requisite extension at Drumchapel will cost about £100,000. It is gratifying to note that at the meeting the Lord Provost was able to intimate a list of subscriptions already received amounting to £29,500.

March 25th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

University Education in Ireland.

IT might have been thought that the announcement in Parliament that this question would not be dealt with for some time would have lessened the interest in it in Ireland. It has not had that effect, for the most influential of the morning papers here contain daily columns of letters in reference to what is called "Mr. Bryce's scheme," although nobody knows what it may precisely prove to be. Many meetings have been held here, in England, and even in Calcutta, but the question remains unaltered because of the absence of definite knowledge. On March 22nd two demonstrations were held in Trinity College to protest against Mr. Bryce's scheme, as it is generally interpreted to be. The Provost presided over the principal meeting, which was held in the examination hall, and the resolutions were spoken to by Lord Ashbourne, Lord Iveagh, Sir Edward Carson, M.P., and many others. The *noli me tangere* policy has been fully adopted by the University of Dublin. It may succeed, or it may not, but the existing conditions have certainly worked well here for 300 years.

Motor-car Accident in Dublin.

Lady Thomson, wife of Sir William Thomson, was knocked down by a motor-car on March 23rd, just in front of their residence in Stephen's Green. The staff of St. Vincent's Hospital, situated a few doors off, were quickly in attendance. Sir William Thomson and her brother, Sir Thornley Stoker, arrived soon and it was ascertained that the patient, although badly bruised, was happily not seriously injured. The owner of the motor-car, who was also its driver, was brought before the chief magistrate on March 25th and remanded on bail pending the convalescence of Lady Thomson and her ability to appear in court.

The Belfast Health Commission.

During the past week the members of the Health Commission have spent their time in visiting mills, slums, and other places referred to in evidence. They also held one night sitting on March 20th, when some of the labour party tendered evidence as to work in the mills and as to filled up ground. The Commission, owing to the Easter holidays, will not sit again until April 8th, when it meets in the City Hall, Belfast. The Ulster Medical Society has nominated a number of members, Dr. A. Dempsey, Sir John Byers, Professor J. A. Lindsay, Dr. W. Calwell, and Dr. J. McCaw, to give evidence; and Dr. H. Stevenson, the honorary secretary, is to present a series of resolutions passed at various times by the Ulster Medical Society in regard to questions of public health.

Ulster Eye, Ear, and Throat Hospital.

At the annual meeting of the friends of this charity held on March 21st it was reported that there had been 2170 extern and 340 intern patients during the past year. The debt has been reduced from £324 10*s.* 6*d.* to £230 9*s.* 7*d.* 212 operations were performed.

The Public Health of Belfast.

At a meeting of the public health committee of Belfast held on March 21st the superintendent medical officer of health presented a dismal report. The death-rate for the week ended March 16th from all causes was 22·3 and from the principal zymotics 1·4. There were 18 cases of typhoid fever, ten of scarlet fever, 11 of diphtheria, and 24 of epidemic cerebro-spinal meningitis, as compared with 11, 13, three, and 31 for the previous week. The total number of cases of "spotted fever" since the outbreak of the disease was now 201, and there had been 107 deaths. The medical officer of health reported that there was great difficulty in persuading parents of children suffering from cerebro-spinal meningitis to have the patients removed to Purdysburn fever hospital for treatment, and he asked for instructions on the point, but after discussion it was decided to leave the matter in his hands. It would have been better had he explained the objections that the parents of the patients have in regard to the hospital, but this will doubtless come out at the inquiry before the Health Commission. At Purdysburn fever hospital, which accommodates 168 patients, there are now 122 cases; of these 25 are suffering from typhoid fever, 39 from scarlet fever, 15 from diphtheria, and 39 from cerebro-spinal fever.

Cerebro spinal Fever.

Despite the fact that the disease is notifiable, that isolation is being promptly used, that it has been advised to boil the water and the milk, and that disinfectants are being given away profusely—so profusely that a deputation of chemists has complained to the public health committee of the unfairness of such lavishness—and, finally, that the weather has become much milder, cerebro-spinal meningitis continues its course apparently unchecked. Five deaths were reported on March 25th and six fresh cases were notified, and up to the present (March 26th) the total number of cases reported is 218, with 118 deaths. Both the medical profession and the public fear that the measures employed are not resulting in the stamping out of the epidemic.

March 26th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Aneurysm of the Ophthalmic Artery cured by Gelatin.

M. Lancereaux and M. Paulesco communicated a paper upon the above subject at the Academy of Sciences on March 4th. They gave the patient injections of gelatinised serum of a strength of 2 per cent. and after 41 injections arrived at a complete cure. Two hours after the first injection the blood in the aneurysmal sac coagulated, with the result that the aneurysmal bruit and the beating sensation disappeared, but as the coagulum contracted after seven or eight hours the sac filled again with blood. Repeated injections gradually caused the sac to become quite full of clot, with the result that the bruit gradually got weaker, changing in quality, and finally the sac became completely and definitely obstructed.

A Possible Antidote for Strychnine.

On March 12th M. Pouchet communicated to the Academy of Medicine a letter addressed by the French consul at Batavia to the Minister for Foreign Affairs. Certain planters whose cocoa plantations had suffered much from the attacks of monkeys laid strychnine for them. It was then noticed that after the monkeys had eaten the strychnine they made for certain trees which they climbed and of which they proceeded to eat the leaves. Such monkeys never showed any symptoms of poisoning and continued their games as before. M. Pouchet thought that it would be interesting to get specimens of the leaves of these trees so as to see whether they really had any antidotal properties for strychnine.

Small-pox and Vaccination at Laos.

M. Kermorgant read a communication sent in by M. Rouffiandi, a *médecin major* of colonial troops, before the Academy of Medicine on March 12th on the subject of small-pox and vaccination at Laos from 1889 to 1906. The country in question, the area of which is 267,000 square kilometres, has only 500,000 inhabitants. The villages are, therefore, very distant the one from the other. There are only five medical men throughout the whole territory and they have to go their rounds either by horse or by elephant, or occasionally by steamer. In 11 years these medical men have performed 196,830 vaccinations with 49 per cent. of success, but it must be remembered that the vaccine which comes from Saigon is often from 55 to 60 days old. These medical men have also to resist strenuously the practice of small-pox inoculation which is still widespread in the country, but they have made one great step in advance, for at Hieng-Khouang on the plateau of Tranninh, which is 1200 metres above the sea, they have started a vaccine station which since the year 1905 has been able to furnish the whole of Haut-Laos with vaccine lymph.

March 25th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

"Christian Science" and the Treatment of Supposed Demoniacal Possession.

A REMARKABLE manifestation of religious insanity occurred lately in the family of a man residing in Berlin. He was suffering from tuberculosis and the members of his household had become converts to the doctrines of Mrs. Eddy, frequently attending meetings of the "Christian Scientists." These meetings are now held in private dwellings because the police, guided by decisions of the law courts, no longer allow public meetings to take place. The patient's family, after these meetings, prayed for hours without intermission and when he declined to join them they treated him somewhat roughly, although they had formerly been kind and attentive. One evening the neighbours heard loud singing and praying, mingled with sounds of a great disturbance, going on in the man's house. The man himself was yelling and shouting for help but the neighbours who went to his assistance found all the means of ingress securely barred, so the police were sent for and the door was forced. It was then seen that the family, including the mother, two sons, and two daughters, all grown up, were in a frenzy of excitement, singing and praying and beating the patient, at the same time vociferating that the devil was in him and must be expelled. The room was in a state of great disorder and most of the furniture was destroyed. Clothes had been thrown on to the fireplace because they were said to be the work of the devil and so were banknotes and other valuable property. The patient had received several wounds from his family in their attempts to expel the devil. The father was accordingly conveyed to a hospital and the family to the Walldorf lunatic asylum. The case is remarkable, firstly because of the simultaneous occurrence of religious monomania in several members of a family; and secondly because of the disastrous influence of the doctrines of "Christian Science" on the minds of certain people. This family had lived in happiness until the teaching of the "Christian Scientists" so unhinged the minds of some of them that, in a paroxysm of maniacal fury, they committed a violent assault on their unoffending relative. "Christian Science" has of late been seldom mentioned in the newspapers and the sect was therefore believed nearly to have disappeared from Berlin because of the prosecutions instituted by the authorities, but now it appears that numerous groups, including members of every class of society, meet in private residences. The authorities have announced that the assailants of the tuberculous patient will not be prosecuted because they cannot be made responsible for their acts committed in a state of obvious mental derangement. Public opinion would approve of proceedings being taken against the avowed supporters of "Christian Science," who are morally responsible for the scandalous affair just described, but the police declare that they have no power to interfere with meetings of the sect so long as they are held in private houses and are attended only by special invitation.

Dispute as to the Possession of a Calculus.

A curious case is about to be brought before a law court in Saxony. A man who had been operated on for calculus afterwards declined to pay the surgeon's fees because the calculus had not been given to him after the operation. He insisted that the calculus was his property and even threatened the surgeon with a prosecution for having used it for purposes of scientific research. The *Münchener Medicinische Wochenschrift* advises surgeons previously to an operation to make an arrangement with the patients concerning their rights of property in calculi, growths, or parts of the body which might have to be removed.

Congress of the Roentgen Society.

The German Roentgen Society will hold its third annual congress at Berlin in Langenbeck House, under the presidency of Dr. Albers-Schönberg of Hamburg. The principal subject of discussion will be the influence of radiography on the diagnosis and the treatment of fractures. The discussion will be opened by Professor Oberst of Halle and Dr. Immelmann of Berlin.

A Polyglot Medical Journal.

It is announced that an international medical journal is about to make its appearance in Berlin. It will be issued in five languages—namely, German, English, French, Italian, and Spanish. Original articles written in the language of the respective authors will appear translated in the other editions. The first number will contain articles by Dr. Plehn of Berlin on the Treatment of Dysentery, by Professor Regnault of Paris on Prostitution in Paris, by Professor Aaron of Detroit, United States of America, on the Treatment of Cholelithiasis, and by Professor Vargas of Barcelona on the Administration of Goat's Milk to Infants. Other articles will be contributed by Professor Einhorn of New York, Dr. Sakorrhaphos of Athens, Dr. Halsey of New York, Dr Legner of Wiesbaden, and Dr. Kossmann of Berlin. English medicine will be represented by Dr. Robert Hutchison who will contribute an article on the Treatment of Stenosis of the Pylorus.

March 25th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Notre Dame Hospital, Montreal.

AT the recent annual meeting of the board of governors of Notre Dame Hospital, Montreal, Dr. L de L. Harwood, the medical superintendent, read the report which embraced the 18 months ending on Dec. 31st, 1906. According to that report 3255 persons had been under treatment in the various wards of the institution, of whom 1864 were men and the balance women. The medical cases numbered 1100, the surgical 1387, the gynæcological 521, and the ophthalmological 247. Of all these 1873 were discharged as recovered, 896 as improved, and 114 as incurable. The percentage of deaths was 7·89. St. Paul's Contagious Diseases Hospital, connected with Notre Dame Hospital, admitted 200 cases of diphtheria, 67 of scarlet fever, 196 of measles, and 17 doubtful cases; 22 deaths occurred, giving a death-rate of 4·5 per cent. It was announced at the meeting that an additional sum of 8500,000 dollars would be needed to complete the new hospital.

McGill University, Montreal.

Dr. T. G. Roddick, dean of the Medical Faculty of McGill University, announced at the annual dinner of the student body that he would shortly retire from the deanship. For over 40 years Dr. Roddick has been connected with the McGill Medical College, Montreal, as student, lecturer, professor, and dean; and the students took advantage of the opportunity thus afforded them of presenting to him an address appreciative of his efforts for the success of McGill University. In replying to the address Dr. Roddick also referred to a measure which he had very much at heart—namely, Dominion registration. He believed that this scheme was now in a fair way of being successful and that the day was at hand when the provincial boards would be abolished and the Dominion Medical Council would come into existence. Dr. Francis J. Shepherd will probably succeed Dr. Roddick in the deanship.

Hospitals and Houses of Refuge in Ontario.

According to the annual report of Dr. R. W. Bruce-Smith, inspector of hospitals in Ontario, there are now 61 hospitals in the Province of Ontario getting assistance from the Ontario Government. There are also 37 refuges, 30 orphanages, three homes for incurables, two convalescent homes, two Magdalen asylums, and 25 county houses of refuge. The total number of patients under treatment in the various hospitals of Ontario during the past hospital year was 41,950. The total cost in running these hospitals was $1,228,289, of which amount the Ontario Government contributed $110,000. The report recommends the establishment of an institution for the care of feeble-minded women, of whom there are said to be 500 in the province.

Sad Death of a Medical Man.

It is now well established that Surgeon Flood of the Royal North-West Mounted Police, stationed at Fort Churchill, was frozen to death in the great storm of Nov. 29th, 1906. On his way with Major Moodie and Engineer Thibadeau from Fort Churchill, where they constituted a survey party for the Federal Government, he had set out for the purpose of exploring for timber. The grub box was dropped on the way and Surgeon Flood offered to take the dog train and go back for it. That was the last seen of him alive. When the body was found the faithful leader of the dog train was found stretched by his side. The body of

Surgeon Flood was buried in the barracks at Fort Churchill on Hudson Bay, his being the first death and the first grave in the history of the Royal North-West Mounted Police in the Hudson Bay district.

The Academy of Medicine, Toronto.

The Ontario Medical Library Association, with a fine library and building fully paid for, has amalgamated with the Toronto Clinical Society, the Toronto Medical Society, and the Toronto Pathological Society into the Academy of Medicine, Toronto. The Academy will be managed during the first year by a council of 12, which will be composed of the officials of the Library Association and the president and secretary of the other three societies. Succeeding councils will be composed of 19 members. Besides the ordinary members there will be resident and non-resident fellows. An addition will be built to the present building at a cost of $50,000 to provide for a fireproof library and auditorium. Dr. J. F. W. Ross is the president of the Library Association, Dr. H. B. Anderson of the Toronto Clinical Society, Dr. R. D. Rudolf of the Toronto Medical Society, and Dr J. A. Amyot of the Toronto Pathological Society. The Academy will be composed at first of four sections—namely, the library section, the medical, the surgical, and the obstetrical sections.

Patent and Proprietary Medicines.

The Hon. Mr. Templemand, from British Columbia, has introduced into the Dominion House of Commons a Bill the chief provisions of which are as follows. Every manufacturer or importer of medicines, or agent of such manufacturer or importer, before offering such medicines for sale shall submit to the Department of Inland Revenue two samples of such medicine so manufactured, together with the name of the medicine and a statement declaring whether the medicine does or does not contain alcohol or any of the poisons set forth in the schedule attached. With such samples a fee is also to be transmitted when, if found satisfactory, a licence will be issued. The Bill will also provide for fines and penalties for non-compliance with the provisions of the law.

Royal Victoria Hospital, Montreal.

The number of patients admitted into the wards of the Royal Victoria Hospital, Montreal, during the last hospital year was 3444, an increase of 351 over the previous year. Of this number 1989 were free patients, 1021 public ward patients, and 434 private ward patients. The total days' hospital treatment was 73,993. In the outdoor departments the total number of patients treated was 4229. The income for the year was $160,436, while the ordinary expenditure amounted to $130,353, the balance of $30,082 being applied in the reduction of the indebtedness incurred by new buildings. Dr. W. F. Hamilton and Dr. C. F. Martin were appointed physicians to the hospital. Dr. Francis J. Shepherd was appointed consulting surgeon, retaining his position as surgeon at the General Hospital.

Toronto General Hospital.

For the year ending Sept. 30th, 1906, there were in residence in the Toronto General Hospital each month the following patients: October, 1905, 313; November, 319; and December, 311; January, 1906, 325; February, 356; March, 341; April, 299; May, 293; June, 292; July, 278; August, 261; and September, 267. The average length of stay per patient was 27·19 days. The cost per head per day was $1.337. There were performed in the main theatre 905 operations; in the pavilion theatre, 239; and in the eye and ear department, 162. On Sept. 30th, 1905, there were 175 males, 122 females, and eight children in the hospital. During the year there were admitted 2121 males and 1462 females and there were born in the hospital 197 children. The patients remaining in the institution on Sept. 30th, 1906, were 264 adults and 15 children.

Toronto, March 14th.

PRESENTATION TO A MEDICAL PRACTITIONER.—On March 4th Dr. H. P. Taylor of Mid Yell, Shetland, was presented by his friends and patients in the islands of Yell and Fetlar with a Blickensderfer typewriter and case and a cheque as a mark of their esteem. Mrs. Taylor was presented with a case of fish knives and forks.

Obituary.

SURGEON-GENERAL SIR JOHN HARRIE KER INNES, A.M.D. (RET.), K.C.B., K.H.S., F.R.C.S. ENG.

FULL of years and honours this distinguished surgeon died on Tuesday, March 12th, in Florence, at his residence in the Piazza dell' Indipendenza, and on the Friday following at the Protestant Cemetery of the Allori, in the presence of many mourners, British, Colonial, and American, the urn containing his ashes was placed beside the grave of his wife who predeceased him in 1901. Though for some time back in failing health, Sir John Innes seemed to possess a wonderful rallying power, and less than three weeks ago he surprised his friends at the Florence Club by dropping in, just as he used to do in the old days, and joining in conversation with his wonted vivacity. But that was his last appearance in public. The influenza, which has numbered many victims during all the winter along the French and Italian Riviera and in the landward winter cities, claimed him also, double pneumonia supervened, and after a brief struggle he passed peacefully away.

Born in 1820 of Scottish parentage—his father was the Rev. J. B. Innes—he showed an early predilection for medical study and was educated at University College, London. In 1841 he obtained the diploma of the Royal College of Surgeons of England. Entering the Army Medical Department in 1842 he was destined to see a good deal of war service in the course of his army career. To begin with, he gained much valuable experience in the Crimean campaign of 1854 where he served as a volunteer and took part in the attack on the Redan on June 18th. He then proceeded to India and served with great distinction throughout the Indian Mutiny with the 1st Battalion of the 60th Rifles, and more especially in connexion with the action on the Hindun, the battle of Budlee-ke-Serai, and the storming of the heights before Delhi, and the siege, assault, and capture of that city. He bore an honourable part during the eventful days of Delhi and Rohilkund. Acting as principal medical officer of Sir John Jones's force, he went through the Rohilkund campaign and subsequently held a like appointment in Oude with Brigadier Troup's column. In recognition of his services during the Mutiny he received the C.B. and was promoted a deputy-surgeon-general in 1858; surgeon-general in 1872. In 1871 he was selected to act as British medical commissioner on the staff of the Crown Prince of Prussia during the Franco-German war and at the close of this campaign he received the war medal and the Iron Cross. From 1876 to 1880 he held the appointment of principal medical officer in India and in 1878 he was appointed an honorary surgeon to Queen Victoria. In 1878-79 Surgeon-General Innes's duties as principal medical officer took him to Afghanistan and he was present at the assault and capture of Ali Musjid and the subsequent advance up the Khaiber Pass. Retiring in 1880, he was promoted to be a Knight Commander of the Bath in 1887 and on the death of the Queen he was gazetted to the K.H.S. which he held at his death.

Elected Fellow of the Royal College of Surgeons in 1860, in 1863 he married Miss Victoria Baker, daughter of Mr. N. Baker, who, all through his subsequent professional career and in his retirement in Florence, contributed much to make his house the resort of lovers of fine art—of music especially.

When Sir John Innes's active life, professionally speaking, came to a close he took up his residence in Florence, but he continued to intervene in beneficent work of all kinds, chief of which was the part that he bore in administering the British Relief Fund in aid of those who have been overtaken by ill-health and the indigence which it often brings with it in the Tuscan capital. He was a zealous promoter of other local charities, while his work on the reconstruction committee of the Church of the Holy Trinity contributed much to make that edifice what it is universally admitted to be—one of the most beautiful, as it is one of the most frequented, of the Anglican churches on the continent. Other interests also found in him an active and genial votary, the Florence golfing club being only less indebted to his support than the private theatricals and the musical recitals which (with the personal intervention of Lady Innes) did much to make "la vita fiorentina" enjoyable to the English-speaking colony—resident or migratory.

This is not the place to speak of his private benevolence, which was as large as it was unobtrusive. Let it suffice to say that by his death the Florentine community is in many ways the poorer, as it will continue to realise for some years to come.

CHARLES JAMES OLDHAM, F.R.C.S. ENG., L.R.C.P. LOND., L.S.A.

THE late Mr. Charles James Oldham of 38, Brunswick-square, Brighton, supplied in himself a remarkable instance of proficiency in two rather dissimilar pursuits. By profession an ophthalmic surgeon he made instrumental music his pastime and became quite celebrated for his collection of Stradivari violins. As already mentioned in our columns, Mr. Oldham died at Brighton on Jan. 24th after an attack of broncho-pneumonia of about 12 days' duration. He was born on Jan. 22nd, 1845, being the eldest son of Mr. James Oldham, F.R.C.S., who began practice in Brighton in January, 1840, travelling there by the first train which went through from London. Mr. James Oldham was one of the founders of the Sussex Medico-Chirurgical Society and was its first secretary. The family is said to be descended from a Lancashire family, one member of which was Hugh Oldham, Bishop of Exeter, who founded Manchester Grammar School, united with Bishop Fox in endowing Corpus Christi College, Oxford, and died in 1519. Mr. Charles Oldham received his school education at Rugby under Dr. Temple, and when a youth was a keen football player. From 1866 to 1871 he studied medicine at Guy's Hospital, where his uncle, Dr. Henry Oldham, had been one of the physicians. In 1870 he took the diplomas of M.R.C.S. Eng., L.R.C.P. Lond., and L.S.A.; in 1871 he was admitted F.R.C.S. Eng. At Guy's Hospital he held the appointments of house physician, house surgeon, and resident accoucheur. He was also resident medical officer at the Evelina Hospital for Sick Children and clinical assistant at the Royal Ophthalmic Hospital, Moorfields. In 1873 he commenced practice in Brighton in partnership with his father until the retirement of the latter in 1880. Mr. Oldham's surgical proclivities were mostly in the direction of ophthalmology and as early as 1872, at the International Ophthalmic Congress held in London, he read an account of an improved refracting ophthalmoscope. His hospital appointments included those of surgeon to the Brighton Hospital for Diseases of the Eye, consulting surgeon to the Brighton Blind Asylum, and assistant surgeon to the Central London Ophthalmic Hospital. In 1886 he was president of the Ophthalmological Section of the British Medical Association; he was also vice-president of the Ophthalmological Society and a member of the council; in the Brighton and Sussex Medico-Chirurgical Society he filled the offices of president and treasurer.

Mr. Oldham's musical abilities procured for him the positions of a director of the Royal Academy of Music and president of the Brighton Sacred Harmonic Society. For many years he played in the orchestra among the first violins at the society's concerts and he led the orchestra at the Good Friday performances of the "Messiah." His collection of Stradivari instruments, already referred to, included three violins, a viola, and a violoncello. For one of these he paid over £3000 and it has recently been on sale for £3500. One violin and the viola were made by Stradivari for the King of Spain. These various instruments were, with one exception, bequeathed by him to the British Museum. Since the publication of the details of the will regrets have been expressed that these masterpieces should be deposited in the British Museum, where they would only be seen in a glass case and would never be played upon. The explanation is, we believe, that the deceased had a great aversion to art treasures of any kind leaving the country and a great dread of their being stolen. His object, therefore, was to place his own collection in keeping where it would not be sold, stolen, or sent out of the country.

Mr. Oldham left estate valued at £77,959 gross, with net personalty £77,418, and of this he has set aside about £60,000 for educational purposes. The chief of the bequests are £10,000 to Corpus Christi College, Oxford, for the encouragement of general learning and of studies of classics; £5000 each to the Universities of Oxford and Cambridge for scholarships for proficiency in classics and in the works of Shakespeare; £3000 to the Manchester Grammar School, founded by his kinsman, Hugh Oldham, formerly Bishop of Exeter; and £5000 to Epsom College. There are also bequests of £1000 each to the Medical School of Guy's Hospital, the Royal Academy of Music, the Sussex Eye Hospital, the Brighton, Hove, and Preston Dispensary, the Brighton and Sussex Medico-Chirurgical Society, the Brighton Sacred Harmonic Society, and the Actors' Benevolent Fund. The bequest to Guy's Hospital is for a prize in ophthalmology and that to the Royal Academy of Music is intended for the foundation of a violin scholarship. Subject to various bequests or legacies to relatives, friends, and servants he leaves the residue of his property to Corpus Christi College and the Manchester Grammar School. The funeral took place at the Extra-Mural Cemetery, Brighton, on Jan. 29th, and was very largely attended.

CHARLES WEST, L.D.S. R.C.S. ENG.

Mr. Charles West, of 41, Finsbury-square, E.C., died somewhat unexpectedly on March 8th from pneumonia following an operation at the German Hospital, Dalston, N.E. He took the diploma of L.D.S. R.C.S. Eng. in 1863 and had been honorary dentist to the German Hospital for about 35 years; he had also for many years acted in a similar capacity at Queen Adelaide's Dispensary, Bethnal Green-road, N.E. Mr. West was a member of the Odontological Society and a past president of the Metropolitan branch of the British Dental Association. He took a great interest in microscopical research and was a member of the Quekett Society and Selborne Society. He had travelled extensively in Europe and America. In his younger days he was a lieutenant in the Tower Hamlets Volunteers and had gained several prizes for shooting. His death will be regretted by a large number of private and professional friends. The mortal remains were cremated (by the wish of the deceased) at Golders Green, Hampstead, on March 12th, and the funeral took place at Highgate Cemetery on the following day, the Rev. Percy Martin officiating.

JAMES GOOD CURTIS, F.R.C.S. IREL., L.R.C.P. EDIN.

Much regret was felt amongst members of the medical profession in Cork when on March 4th it was publicly announced that Mr. J. Good Curtis had breathed his last on the previous day. It was generally known that he had been suffering from aortic aneurysm and that his condition was serious, so that the end was not unexpected. For a number of years he was a prominent personage in Cork and held more public appointments than any other medical man in that city. He was for a long time surgeon to the South Infirmary and for some years past was consulting surgeon to that institution. He was also inspector of anatomy, certifying factory surgeon, and medical officer of constabulary. His funeral was very representative. The cortège was led by about 50 members of the Royal Irish Constabulary in charge of a district inspector. Next came about 25 of the nurses of the South Infirmary in their picturesque green uniforms. Then followed quite a number of members of the medical profession immediately in front of the bier on which there was a number of floral wreaths, amongst them one from his medical colleagues at the South Infirmary. The chief mourners were his son, Colonel Curtis, R.A.M.C., and his son-in-law, Colonel MacCarthy. The general public were represented by prominent citizens. Mr. Curtis always took the most roseate view of life and had that happy disposition which results in making many friends and few enemies.

FRANK EVERITT MURRAY, M.B., B.C. CAMB., F.R.C.S. ENG.

Dr. Frank Everitt Murray, who died at Graaf Reinet, South Africa, on Feb. 1st, was the youngest son of Mr. W. E. Murray of Roodibloem, Graaf Reinet. He began his medical training at St. John's College, Cambridge, in the autumn of 1894. Having taken his degree in the Natural Sciences Tripos in 1899, he entered as a student at St. Bartholomew's Hospital, London, whence he graduated as M.B., B.C. Camb. in 1901. In 1902 he acted as house surgeon to Mr. John Langton at St. Bartholomew's Hospital and in the following year he became a Fellow of the Royal College of Surgeons of England. Returning to South Africa, he resided in Cape Town for a few months and afterwards joined Dr. J. L. Rubidge in Graaf Reinet, where he had endeared himself to the public and the profession, and his advice was much esteemed by his colleagues in cases of

difficulty. Six months ago he sustained a severe fracture of the thigh caused by an accident in the hunting field, and he never afterwards regained his strength. The illness to which he succumbed was a virulent form of typhoid fever. This sad and early termination of Dr. Murray's promising career will cause great regret to a large circle of friends not only in South Africa, but also among his old fellow students in England, and much sympathy will be felt with his wife and two little children in their bereavement.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Oscar Israel, *Custos* of the Berlin Pathological Institute, in his fifty-third year.—Dr. Erb (son of the Heidelberg professor), assistant in the Strasburg University Medical Clinic.—Several continental journals reported recently the death of Dr. Roux, professor of surgery in Lausanne. We are glad to hear that the report is without foundation. Professor Roux has, however, been suffering from an attack of pneumonia, from which he is now convalescent.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated:—

Surgery.—F. A. Bainbridge (Sections I. and II.), St. Bartholomew's Hospital; A. E. Blythman (Sections I. and II.) and S. F. Fouracre (Section I.), Charing Cross Hospital; A. F. Palmer (Sections I. and II.), Cambridge and Middlesex Hospital; and A. Shepperd (Sections I. and II.), Guy's Hospital.
Medicine.—F. A. Bainbridge (Sections I. and II.), St. Bartholomew's Hospital.
Forensic Medicine.—F. A. Bainbridge, St. Bartholomew's Hospital; and E. S. Cooke, Royal Free Hospital.
Midwifery.—F. A. Bainbridge and H. Morris, St. Bartholomew's Hospital; E. H. Paterson, Guy's Hospital; and W. F. Skinner, Sheffield and University College Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery:—F. A. Bainbridge, A. E. Blythman, A. F. Palmer, and W. F. Skinner.

UNIVERSITY OF CAMBRIDGE.—At a congregation on March 14th the following degrees were conferred:—

M.D.—G. H. L. Whale, Jesus; F. B. Shipway, Christ's; and W. B. Heywood, Emmanuel.
M.B.—W. O. Pitt, Emmanuel.

—The General Board of Studies proposes the appointment of a second additional demonstrator of physiology, without stipend from the University, in Professor Langley's department.

TRINITY COLLEGE, DUBLIN.—At examinations held in Hilary term the following candidates were successful:—

FINAL MEDICAL EXAMINATION.

Part II.—Surgery.—Frank R. Seymour, John Gray, Ernest Jameson, Edward C. Stoney, George G. Vickery, Francis W. H. Bigley, Henry P. Hart, Albert T. J. M'Creery, Arthur F. Knapp, Rev. Richard B. Bryan, John W. Lane, George H. Stack, and John H. Morton.

INTERMEDIATE MEDICAL EXAMINATION.

Part I.—Robert E. T. Tatlow, Victor B. Kyle, Hugh S. Metcalfe, William P. H. Smiley, Charles D. Hanan, Charles B. Jones, Desmond Drew, James D. Murphy, and Alexander K. Cosgrave.

DIPLOMA IN PUBLIC HEALTH.

Part I.—Cecil Scaife.

FOREIGN UNIVERSITY INTELLIGENCE.—*Algiers:* Dr. Bouin of Nancy has been appointed Professor of Pathological Anatomy and Histology in succession to the late Dr. Pianteau.—*Basle:* Dr. Max Wilms of Leipsic has been appointed Professor of Surgery in succession to Professor Enderlen who goes to Würzburg. Dr. Leopold Rütimeyer, *privat-docent* of medicine, has been promoted to an Extraordinary Professorship. Dr. Dietrich Gerhardt of Jena, who had been offered a chair in Erlangen, has decided to accept instead the Professorship of Pharmacology in Basle.—*Berlin:* Dr. Eugen Hollander and Dr. Heinrich Riese have been granted the title of Professor. Dr. Philipp Bockenheimer has been recognised as *privat-docent* of Surgery.—*Berne:* Dr. Léon Asher has been appointed Extraordinary Professor of Physiology.—*Bordeaux:* Dr. Cruchet has been appointed, after competition, *agrégé* in medicine.—*Florence:* Dr. Luigi Lenzi has been recognised as *privat-docent* of External Pathology.—*Göttingen:* Dr. Bruno Salge of Dresden has been appointed Extraordinary Professor of Children's Diseases. Dr. F. Samuley has been recognised as *privat-docent* of Medicine.—*Greifswald:* Dr. Leopold Heine of Breslau has been appointed Professor of Ophthalmology in succession to Dr. Schirmer.—*Groningen:* Dr. A. Klein of Amsterdam has been appointed Professor of Hygiene, Forensic Medicine, and Pharmacology.—*Kiel:* Dr. Otto Schirmer of Greifswald has been appointed Professor of Ophthalmology in succession to Dr. Völckers, resigned.—*Lille:* Dr. Raviart and Dr. Breton have been appointed, after competition, *agrégés* in Medicine.—*Lyons:* Dr. J. Lépine, Dr. Lesieur, and Dr. Martin have been appointed, after competition, *agrégés* in Medicine.—*Marburg:* Dr. W. Danielsen has been recognised as *privat-docent* of Surgery.—*Montpellier:* Dr. Lagriffoul, Dr. Leenhardt, and Dr. Gaussel have been appointed, after competition, *agrégés* in Medicine.—*Naples:* Dr. Giuseppe Lucibelli has been recognised as *privat-docent* of Medicine.—*Paris:* Dr. Castaigne, Dr. J. Sicard, Dr. Nobécourt, Dr. Jousset, and Dr. Loéper have been appointed, after competition, *agrégés* in Medicine.—*Pavia:* Dr. Guido Sala has been recognised as *privat-docent* of Neurology and Mental Diseases.—*Pisa:* Dr. Taddeo De Hieronymis has been recognised as *privat-docent* of Hygiene.—*Prague (German University):* Dr. Elschnig of Vienna has been offered the chair of Ophthalmology to succeed the late Professor Czermak. Dr. Kretz of Vienna has been offered the chair of Pathological Anatomy in succession to Professor Chiari who goes to Strasburg.—*Rio de Janeiro:* Dr. José Antonio Abreu Fialho has been appointed Professor of Ophthalmology in succession to the late Dr. da Cunha.—*Rome:* Dr. Riccardo Dalla Vedova has been recognised as *privat-docent* of Surgery and Operative Medicine.—*Strasburg:* Dr. Karl Pfersdorff has been recognised as *privat-docent* of Psychiatry.—*Toulouse:* Dr. Dalous has been appointed, after competition, *agrégé* in Medicine.—*Turin:* Dr. Giuseppe Gavello has been recognised as *privat-docent* of Oto-rhino-laryngology. Dr. G. Battista Allaria has been recognised as *privat-docent* of Children's Diseases.—*Vienna:* Dr. Otto Zuckerkandl, *privat-docent* of Surgery, and Dr. Max. Salzmann, *privat-docent* of Ophthalmology, have been granted the title of Professor.—*Würzburg:* Dr. Alfred Sommer has been recognised as *privat-docent* of Comparative Anatomy and Histology.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held on March 21st at Caxton House, Westminster, Dr. F. H. Champneys being in the chair. The following letter, concerning the midwives roll, addressed to the secretary of the Central Midwives Board was received from the Privy Council:—

SIR,—Referring to your letter inquiring whether the Central Midwives Board has power under the Midwives Act, 1902, to remove the name of a midwife from the roll for reasons other than misconduct I am directed by the Lords of the Council to state that the object of the Act being to provide women in childbirth with the attendance of properly qualified persons, it is, in their lordships' opinion, clearly part of the duty of the Central Midwives Board in respect of what "may be necessary for the due and proper carrying out of the provisions of the Act," to withdraw certificates from persons who are either too old or infirm, or for any other reason incapable of discharging their functions in the event of application being made to them to that effect.

An application was considered from a midwife, Susannah Davies, for the removal of her name from the roll on the ground of defective hearing and memory. The Board resolved to grant the application and directed the secretary to remove her name from the roll of midwives. A letter from Dr. J. Niven, medical officer of health of Manchester, was received reporting a conviction under Section 1 (1) of the Midwives Act protecting the title of midwife. A letter was considered from Dr. Sidney Barwise, county medical officer of Derbyshire, as to the licensing and inspection of certified midwives taking cases into their own homes. The Board resolved to refer the letter to the Act Amendment Committee when formed.

HOLIDAYS FOR WORKING LADS.—The "Clerk of the Weather" is more often blamed than praised in our varying climate, but in the eighteenth annual report of the Seaside Camps for London Working Boys thanks are accorded to the "glorious summer of 1906" for its share in securing the success which has once more crowned the work of the committee. 2551 lads were received at the camps at Bexhill, Eastbourne, and Dymchurch and glowing accounts of their enjoyment are given in this report. Bishop Taylor Smith, Chaplain-General to the Forces, spent a week at Bexhill camp

as chaplain and endeared himself to officers and lads alike. A visitor at Dymchurch writes: "Think of the tremendous change it must be to a London boy living in a noisy thoroughfare where the din is incessant or in an over crowded slum to find himself in the open country with hardly a house in sight, with no sounds to wake him in the early morning, save the voice of the lark or the call of the *reveille* bugle! It is indeed a new experience and one which many of these lads would never get were it not for these camps. Surely, to make it possible for them to live a healthy, happy, human life, far removed from the temptations inseparable from great towns, surrounded by influences that make for righteousness, is a religious thing, a deeply spiritual thing. And so I cry, 'God bless the Seaside Camps for the London Working Boys.'" Increased support is asked for and it should be remembered that it is important that an organisation of this kind should have its funds in hand as early as possible in the year, so that it may know in good time how many boys it can undertake to provide for. The office is at 23, Northumberland-avenue, London, W.C., and the secretary is Mr. F. Abel Bloxam.

UNIVERSITY OF LEEDS.—The results of the Second and Final (Part I.) Examinations for the degrees of M.B., B.Ch., were issued on March 22nd. The following passed Part II. of the Second Examination (Anatomy and Physiology)—viz., J. P. Musson, B. C. Piercey, A. Riley, W. Shaw, R. E. Smith, and J. N. L. Thoseby. In Part I. of the Second Examination (Materia Medica), A. Perlman passed. In Part I. of the Final Examination the following passed: J. H. M. Frobisher, G. A. C. Mitchell, and G. C. H. Nicol.—At a recent meeting of the council of the University the following, who are lecturers of the University, were elected to the Faculty of Medicine—viz., Arthur G. Plumley, M.B. Lond., L.D.S. Eng., lecturer on dental surgery; Thomas S. Carter, L.D.S. Eng., lecturer on operative dental surgery; A. Alan Forty, L.D.S. Eng., lecturer on dental anatomy and physiology; and C. Rippon, L.D.S. Irel., lecturer on dental mechanics. Dr. Plumley was also elected a member of the Board of the Faculty of Medicine. At the same meeting of the council the dental committee or honorary dental staff of the Leeds Public Dispensary was requested to nominate two of its members for election as members of the dental committee of the Board of the Faculty of Medicine. The effect of this will be to secure for the clinical part of the School of Dentistry a direct representation in the University.

DEATH OF A CENTENARIAN.—Mrs. Brunt of Berrow, Somerset, died on March 20th, aged 101 years and four months.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Poor-law Medical Officers in Scotland.

MR. CATHCART WASON has presented a petition to the House of Commons from the Poor-law medical officers of Scotland praying that the disabilities under which they have laboured since the passing of the Local Government (Scotland) Act of 1894 might be removed.

Pharmacopœial Formulas for Patent Drugs.

The international agreement respecting the unification of the pharmacopœial formulas for patent drugs, which was signed at Brussels on Nov. 29th, 1906, has been presented to both Houses of Parliament. Its text is now published in French and English. The agreement is signed by representatives of Great Britain, Germany, Austria and Hungary, Belgium, Bulgaria, Denmark, Spain, the United States, France, Greece, Italy, Luxemburg, Norway, the Netherlands, Russia, Servia, Sweden, and Switzerland.

Deaths from Tetanus.

On the motion of Sir WILLIAM COLLINS, in the House of Commons, a return has been ordered of papers containing the results of an inquiry into the origin of certain deaths from tetanus in the Punjab consequent on the employment of Haffkine's prophylactic against plague.

Municipal Milk Depôts.

Mr. JOHN BURNS has presented a Bill in the House of Commons "to authorise and regulate the establishment of milk depôts by certain local authorities and for matters incidental thereto."

Education of Afflicted Children (Ireland) Bill.

Mr. CHARLES CRAIG'S Bill to provide for the better education of afflicted children in Ireland is backed by Mr. MOORE, Mr. HUGH BARRIE, Mr. LONSDALE, and Captain CRAIG. The first clause of the Bill sets forth that it is the duty of local authorities to enable blind and deaf children resident within their area to obtain elementary education in some school which for the time being is certified by the Commissioners of National Education as suitable for providing such education to them. In the second clauses powers are conferred on the local authority to make arrangements for ascertaining what children within its area are defective or epileptic. For the purpose of ascertaining whether a child is defective or epileptic within the scope of the measure a certificate to that effect by a duly qualified medical practitioner approved of by the Commissioners of National Education shall be required in each case. In the next clause power is given to the local authority to obtain elementary education for defective and epileptic children in some school certified by the Commissioners as suitable for the purpose.

HOUSE OF COMMONS.

WEDNESDAY, MARCH 20TH.

The Education (Scotland) Bill.

Mr. SINCLAIR, the Secretary for Scotland, in introducing the Education (Scotland) Bill said that amongst its various purposes the Bill provided for the medical examination and supervision of pupils at the option of the School Board or where special circumstances existed at the option of the Education Department. There was power in the Bill to do all that was necessary in the way of providing the necessary machinery for the provision of meals for school children. A clause of the Bill dealt with what might be termed neglected children. In these cases it was provided that where as the result of medical inspection or otherwise it was brought to the knowledge of the School Board that a child was neglected or was in a filthy or verminous condition, or ill-clad, or ill-fed it should be the duty of the School Board to make inquiry as to the reasons for his condition. If the parent appeared to be at fault he was to be prosecuted as for cruelty to children and provision made for the child accordingly. If the parent was unable, by reason of poverty or ill-health, to do his duty by the child the case was to be referred to the parish council, but help given by the parish council for this purpose would impose no disability on the parent. The School Board had the power in the meantime, and so long as might be necessary pending inquiry, to make provision for the child out of school funds.

Sir HENRY CRAIK, in the course of a criticism on various points in the Bill, said that he was glad to see that it made provision for some medical care of the children in the schools. He pointed out that a Bill for the provision of meals for school children had already been introduced into the House by the Labour Members. That Bill threw the financial onus on the School Board, but the Bill of the right honourable gentleman threw it on the parish council. There was a fundamental distinction between the two principles. Which was the Government prepared to follow?

The Bill was introduced and read a first time.

The Ennis State Inebriate Reformatory.

Mr. WILLIAM REDMOND asked the Chief Secretary to the Lord Lieutenant of Ireland how many men and how many women had been committed to the Ennis State Inebriate Reformatory since its establishment; and whether he could estimate how many of these had been considered cured of drunkenness on discharge; and whether he would direct the special attention of the judicial authorities in Ireland to the advisability of sending persons convicted of offences arising from drunkenness to this reformatory instead of to prison.—Mr. BIRRELL (by written answer) replied: Since the establishment of Ennis State Inebriate Reformatory in 1899 33 men and 69 women have been committed, of whom 29 men and 52 women have been discharged. Each case is watched and reported on periodically after discharge. Of the 29 men discharged, 16 are reported cured, 3 are dead, and 10 have relapsed. Of the 52 women discharged, 21 are reported cured, 5 are dead, 2 are in lunatic asylums, and 24 have relapsed. The question of sending persons to the inebriate reformatory is one entirely for the judicial authorities themselves. I will, however, bring the honourable Member's suggestion to the notice of the Lord Chancellor.

FRIDAY, MARCH 22ND.

Owing to the fact that the sitting of Wednesday was prolonged into Thursday afternoon no questions were taken on the latter date. However, on Friday Ministers circulated the replies which in normal circumstances they would have made in the House on Thursday. Some of these are included among the following questions.

Dangerous and Criminal Lunatics.

Major ANSTRUTHER-GRAY addressed the following three questions on the subject of dangerous and criminal lunatics in Scotland to the Lord Advocate: (1) whether a dangerous patient in a district lunatic asylum might be discharged and handed over to relatives relieved but not cured; and, in that case, whether the lunacy authorities had no further charge or responsibility; (2) whether he would consider the advisability of taking the necessary steps to insure that all cases of dangerous lunatics who had committed assault resulting in loss of life should be dealt with in a criminal lunatic asylum, instead of relegating them to a district asylum; and (3) whether, seeing that the presence of criminal lunatics who had committed murder was detrimental to the general freedom from severe discipline in district asylums, the beneficial effect of what was termed the open-door system being acknowledged, he would take the necessary steps to keep the district asylums free from criminal lunatics who had committed murder or attempted murder, as far as possible.—Mr. SINCLAIR (who sent a written answer on behalf of the Lord Advocate) said: The question raised by the honourable Member is under inquiry and I must ask him to recur to the matter at a later date when I shall endeavour to answer his questions.

Typhus Fever in County Galway.

Mr. O'MALLEY asked the Chief Secretary to the Lord Lieutenant of Ireland whether his attention had been called to the fact that typhus fever had broken out in Oughterard, county Galway; that three deaths

had already occurred; that the local hospital was full of patients suffering from this disease; and whether he would make immediate inquiries as to the cause of this epidemic, which was attributed to the extreme destitution of the people consequent on the failure of the potato crop last year.—Mr. BIRRELL (in a written reply) said: An outbreak of typhus fever occurred in this district early in February, since when four families, comprising 25 persons, have been affected. Three deaths have occurred, 16 persons are still in the fever hospital, and six have been discharged cured. The Local Government Board has already investigated the matter and is satisfied that the outbreak was not due to the destitution of the people but to insanitary conditions. None of the people affected were destitute and none had applied for relief at the time of the outbreak. The local medical officer of health, in consultation with the medical inspector of the Local Government Board, is making every possible effort to prevent the spread of the disease. Three additional fever nurses have been appointed by the guardians. There is every reason to hope that no further cases of fever will occur.

The Treatment of Tuberculosis in Parochial Infirmaries.

Mr. WILLIAM PEARCE asked the President of the Local Government Board whether he would state which metropolitan parochial infirmaries had special wards for the treatment of cases of pulmonary tuberculosis; and whether the Local Government Board could encourage the establishment of such wards.—Mr. JOHN BURNS sent the following written reply: In the majority of the metropolitan Poor-law infirmaries special wards are set aside for these cases. The general practice is to extend this system and I desire to encourage it in every way in my power.

Vaccination Wounds.

Mr. LUPTON asked the President of the Local Government Board whether Dr. Fletcher reported on the case of Olive Hunt, who died after vaccination; whether the same Dr. Fletcher reported on the case of Willy Kellam, vaccinated on Oct. 30th, 1906; whether the wound in this case took 72 days to heal; and whether he would lay a copy of Dr. Fletcher's reports upon the table of the House, or give a copy of the report to the relatives.—Mr. BURNS (in a written answer) replied: Dr. Fletcher reported on both these cases. I do not know the precise number of days which the wound took to heal in the case of Kellam. The reports were made for my information and are confidential documents. Hence I could not take the course suggested in the last part of the question.

Medical Attendance on Coastguards in Bute.

Mr. LAMONT asked the Secretary to the Admiralty what was the salary paid for medical attendance on the coastguard of Lamlash and Kildonan respectively in the county of Bute.—Mr. EDMUND ROBERTSON answered: Dr. Robert Jamieson, surgeon and agent, who attends both the Lamlash and Kildonan detachments, is not in receipt of a fixed salary but is paid at the ordinary rate laid down in the instructions to Admiralty surgeons and agents. If my honourable friend wishes, I can furnish him with a statement of the actual amount paid to Dr. Jamieson during the last financial year in respect of these two stations.

Tuberculous Cows.

Sir ARTHUR BIGNOLD asked the President of the Local Government Board whether his attention had been called to the statement made by Professor McCall that the milk from a cow suffering from tuberculous mammitis should on no account be used for human food, and that such an animal should be destroyed or fattened for the butcher; and whether he would take such action as would prevent such animals being fattened for the butcher to the danger of the public.—Mr. BURNS replied in writing: I have not seen the statement referred to. The report made in 1898 by the Royal Commission on Tuberculosis, presided over by Sir Herbert Maxwell, contained a statement of the principles upon which it considered that meat inspectors should act in dealing with the carcasses of animals affected with tuberculosis, and the Local Government Board has more than once brought the views of the Commissioners under the notice of local authorities. The Royal Commission, however, did not go so far as to recommend action of the kind referred to in the last part of the question. A further Royal Commission is now considering the transmission of tuberculosis from animals to man, and I should expect guidance from it as to the course which should be taken with regard to the meat of animals affected by the disease. Meanwhile, I could not undertake to promote the legislation which would be necessary to give effect to the suggestion of the honourable Member.

Lead Poisoning in the Potteries.

Mr. JOWETT asked the Secretary of State for the Home Department whether any special inquiry was being made into the cause of the recent increase of fatal cases from lead poisoning in the Potteries.—Mr. GLADSTONE wrote in reply: The figures of fatal and non-fatal cases of lead poisoning for the first two months of this year show ten cases, as against 19 for the corresponding months of the year before. But of these ten cases four have been fatal, as against none for the first two months of last year. With small numbers irregularities are sure to arise in the records of accidents of all kinds. I do not think any explanation can be given of the number of deaths for this year, which I am informed appear to be due to chronic kidney disease originated by lead poisoning of old standing.

MONDAY, MARCH 25TH.

Infants and Alcohol.

Mr. SMEATON asked the Secretary of State for the Home Department whether he was aware that recent investigation had established the fact that in many quarters of London and other large towns every day of the week, from morning till late at night, the public-houses were crowded with women, who not only took their little children into the heated atmosphere of the public bar but also dosed their infants with alcohol; that eminent expert authorities attributed the physical and moral deterioration of certain classes of the people to the fact above stated; and whether in the coming Licensing Bill he would consider the urgency of including a provision that no child should under any pretext whatever be allowed to enter a public-house.—Mr. GLADSTONE replied: I do not think the state of affairs is as bad as represented by the question, but although it is neither new nor recently discovered the matter is serious and is engaging my earnest attention.

TUESDAY, MARCH 26TH.

Soldiers and Tuberculosis.

Major SEELY asked the Secretary of State for War whether, in view of the fact that only some 6 per cent. of soldiers discharged from the army last year suffering from tubercle of the lung were sent to hospital or sanatoriums, while more than 70 per cent. were sent direct to their homes he could take steps to insure that a larger proportion should in future be sent to institutions where they could receive proper treatment.—Mr. HALDANE said in reply: The disposal of soldiers invalided with tubercle of the lung is a matter involving several difficult considerations, and I propose to institute a small committee to advise as to what steps it may be practicable to take in the direction indicated by the question. I hope my honourable and gallant friend will give his services to this committee.

Calico and Blood Poisoning.

Mr. SUMMERBELL asked the Secretary of State for the Home Department whether his attention had been called to an inquest held at Sunderland on March 18th as to the death of Ann Wilson, aged 16 years, during the hearing of which the house surgeon at the infirmary said that death was due to blood poisoning, which had been set up by the dressing from the calico, the coroner further remarking that the calico was laden with as much dressing as manufacturers cared to put into it for trade purposes, either to obtain a better price for it or to improve its appearance; and, if so, whether it was his intention to introduce any legislation having for its object the restriction of the sale of calico containing matter of such a dangerous character.—Mr. GLADSTONE replied: I have obtained a piece of this calico and I am taking steps to obtain an expert opinion upon it and upon all the circumstances of the case.

Insanitary Workshops.

Mr. RAMSAY MACDONALD asked the Secretary of State for the Home Department how many complaints as to dirty or otherwise insanitary workshops and factories had been sent by the factory department to the metropolitan borough councils during the 12 months ending Feb. 28th last; also the number of prosecutions instituted and cases brought before the court by officers of the metropolitan borough councils for overcrowding or insanitation in such factories or workshops.—Mr. GLADSTONE answered: The number of notices sent by the men inspectors to the metropolitan borough councils during the period named in the question with regard to insanitary conditions in factories and workshops was 488. I have not been able at such short notice to obtain the number of those sent by the women inspectors, but the number in 1906 was 286. I have not the number of prosecutions instituted by the borough councils in respect of insanitary conditions during the period in question, but the figure for 1905, as given by the returns of the medical officers of health, was 19.

Medical Assistance for the Poor in Scotland.

Mr. CATHCART WASON asked the Secretary for Scotland whether, in view of the fact that parish councils could not use money out of the rates to compel a medical man to provide an assistant for the general benefit of the public, he would put into operation the powers of the Local Government (Scotland) Act to protect the interests of the poor.—Mr. SINCLAIR said, in reply: I am informed that the Local Government Board for Scotland have no authority to see that medical assistance is provided for other than the legal poor. The duty of provision for them lies with the parish council.

Medical Attendance in the Navy.

Answering Mr. BOWLES, Mr. GEORGE LAMBERT, Civil Lord of the Admiralty, stated that medicines and free treatment for 30 days in hospital were given to men and boys in the Royal Navy.

BOOKS, ETC., RECEIVED.

APPLETON, SIDNEY, 25, Bedford-street, Covent Garden, London, W.C.

Tics and their Treatment. By Henry Meige and E. Feindel. With a Preface by Professor Brissaud. Translated and edited, with a Critical Appendix, by S. A. K. Wilson, M.A., M.B., B.Sc., Resident Medical Officer, National Hospital for the Paralysed and Epileptic, Queen-square, London. Price 9s. net.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent Garden, London, W.C.

The Röntgen Rays in Medical Work. By David Walsh, M.D. Edin., Senior Physician, Western Skin Hospital, London, W. Part I., The Electrical Apparatus. By H. Lewis Jones, M.D. Cantab., F.R.C.P. Lond., Medical Officer in Charge of the Electrical Department, St. Bartholomew's Hospital. Part II., Medical and Surgical. By the Author. Fourth edition. Price 15s. net.

BARTH, JOHANN AMBROSIUS, Leipzig.

Die wirtschaftlich wichtigen Zecken mit besonderer Berücksichtigung Afrikas. Von Prof. Dr. W. Dönitz, Geh. Med.-Rat., Vorsteher der wissenschaftlichen Abteilung des Kgl. Preussischen Instituts für Infektionskrankheiten. Price M.5; geb., M.6.80.

CASSELL AND COMPANY, LIMITED, London, Paris, New York, and Melbourne.

Elements of Physics. For Medical Students. By Frederic James M. Page, B.Sc. Lond., F.I.C., Associate of the Royal School of Mines, Lecturer on Physics and Chemistry to the London Hospital Medical College, Examiner in Physics and Chemistry to the Society of Apothecaries, London, &c. Price 5s.

DUCKWORTH AND CO., 3, Henrietta-street, Covent Garden, London, W.C.

A Text-book of Plant Diseases caused by Cryptogamic Parasites. By George Massee, Principal Assistant (Cryptogams), Royal Herbarium, Kew. Price 6s. net.

HARRISON AND SONS, 45, Pall Mall, London, S.W.

The Third Huxley Lecture. Delivered before the Medical School of Charing Cross Hospital. By Lord Lister, F.R.S., F.R.C.S. Price not stated.

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin, N.W.

Einführung in die gerichtliche Medizin für Praktische Kriminalisten. Vier Vorträge von Dr. Hugo Marx, I. Assistent der Unterrichtsanstalt für Staatsarzneikunde an der Universität und II. Arzt des Untersuchungsgefängnisses Moabit in Berlin. Price M.2.40.

KIMPTON, HENRY, 13, Furnival-street, Holborn, London, E.C., and Glasgow.

A Treatise on Orthopedic Surgery. By Royal Whitman, M.D., Clinical Lecturer and Instructor in Orthopedic Surgery in the College of Physicians and Surgeons of Columbia University, New York. Third edition, revised and enlarged. Price 28s. net.

KING, P. S., AND SON, Orchard House, Westminster, London, S.W.

The Infant, the Parent, and the State. A Social Study and Review. By H. Llewellyn Heath, D.P.H. Cantab., &c., Fellow of the Royal Institute of Public Health, Member of the Royal Sanitary Institute, formerly Assistant to the Chair of Materia Medica and Therapeutics, University of St. Andrew's, late Deputy Medical Officer of Health Ipswich. With an Introduction by Professor G. Sims Woodhead, M.A., M.D., F.R.S. Edin., Cambridge University. Price 3s. 6d. net.

METHUEN AND CO., 36, Essex-street, Strand, London, W.C.

The Children of the Nation. How their Health and Vigour should be Promoted by the State. By the Right Hon. Sir John E. Gorst. Price 7s. 6d. net.

SURGERY PUBLISHING COMPANY, 92, William-street, New York.

Paraffin in Surgery. A Critical and Clinical Study. By William H. Luckett, B.S., M.D., Attending Surgeon, Harlem Hospital, Surgeon, Mount Sinai Hospital Dispensary, and Frank I. Horn, M.D., Assistant Surgeon, Mount Sinai Hospital Dispensary, New York City. Price $2.

WEBER, J. J., Leipzig.

Deutsches Bäderbuch. Bearbeitet unter Mitwirkung des Kaiserlichen Gesundheitsamtes von Dr. F. Himstedt, Dr. E. Hintz, Dr. L. Grünhut, Dr. C. Jacobi, Herr H. Kauffmann, Dr. K. Keilhack, Dr. H. Klonka, Dr. F. Kraus; Dr. V. Kremser, Dr. P. Nicolas, Dr. Th. Paul, Dr. F. Roehling, Herr A. Scherrer, Dr. C. Schütze, Dr. A. Winckler, Dr. E. Rost, Dr. G. Sonntag und Dr. F. Auerbach, und unter Beihilfe von Dr. K. von Buchka, Dr. E. Dietrich, Dr. O. Lassar, Dr. E. von Leyden, und Dr. E. A. Merck. Price M.15.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week such information for gratuitous publication.*

ALLEN, C. H., M.B., B.S. Edin., F.R.C.S. Edin., has been appointed Medical Officer to the Nottingham Board of Guardians.

COOKE, THOMAS ALFRED BURNARD, L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer by the Pembroke Board of Guardians.

JOHNSON, JAMES BOVELL, M.D., C.M. Montreal, L.S.A. Lond., has been appointed District Medical Officer by the Sturminster (Dorset) Board of Guardians.

KING, WILLIAM WILFRID, L.R.C.P., M.R.C.S., has been appointed Resident Obstetric Officer at the Bristol Royal Infirmary.

SMITH, LIONEL SHINGLETON, L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon at the South Devon and East Cornwall Hospital, Plymouth.

TAYLOR, FRANK H., M.D., B.S. Lond., F.R.C.S. Eng., M.R.C.P. Lond., D.P.H. Cantab., has been appointed Physician for Diseases of Women to the North-West London Hospital and to the St. Marylebone General Dispensary.

TURNER, ARTHUR JOHN, M.B., B.S. Durh., has been appointed Junior House Surgeon at the Bristol Royal Infirmary.

WALTERS, CHARLES FERRIER, F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Surgical Registrar to the Bristol Royal Infirmary.

WYATT, H. D., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician at the Evelina Hospital for Sick Children, Southwark, S.E.

Vacancies.

For further information regarding each vacancy references should be made to the advertisement (see Index)

BEDFORD COUNTY HOSPITAL.—Honorary Assistant Physician.

BIRKENHEAD UNION INFIRMARY AND SANATORIUM.—Resident Assistant Medical Officer. Salary £120 per annum, with board, washing, and apartments.

BIRMINGHAM, QUEEN'S HOSPITAL.—Second Physician for Out-patients and Pathologist. Salary £100 per annum.

BIRMINGHAM, UNIVERSITY OF.—Demonstratorship in Anatomy. Stipend £150 per annum. Also Junior Assistant, Pathological Department. Salary £50 per annum.

BIRMINGHAM WORKHOUSE INFIRMARY.—Assistant Resident Surgical Officer. Salary £104 per annum, with apartments, rations, attendance, &c.

BODMIN, CORNWALL COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £140 a year, rising to £160, with rooms, rations, laundry, and attendance.

BURY INFIRMARY.—Senior House Surgeon. Salary £110, with board, residence, and attendance.

CHICHESTER, WEST SUSSEX COUNTY ASYLUM AND GRAYLINGWELL MENTAL HOSPITAL.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, board, attendance, &c. Also Locum Tenens for 16 weeks, June-September. Terms 3 guineas a week, with full board, rooms, attendance, &c.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician for six months. Salary at rate of £50 per annum, with board and residence.

CROYDON GENERAL HOSPITAL.—Junior House Surgeon. Salary £60, with board, laundry, and residence.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, S.E.—Assistant Surgeon. Also Clinical Assistants for three months.

EXETER, ROYAL DEVON AND EXETER HOSPITAL.—House Surgeon. Salary £120 per annum, with board, apartments, and washing.

GLASGOW EYE INFIRMARY.—Resident Assistant House Surgeon. Salary £75, with apartments and board.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians for six months. Honorarium of £25.

HOSPITAL FOR WOMEN, Soho-square, W.—Resident Medical Officer for six months. Salary at rate of £60 per annum.

HUDDERSFIELD INFIRMARY.—Senior Assistant and Junior Assistant House Surgeon. Salaries £60 and £50 respectively per annum, with board, rooms, and washing.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Assistant House Surgeon. Salary £75 per annum, with residence, board, and washing.

LEICESTERSHIRE AND RUTLAND ASYLUM, Leicester.—Second Assistant Officer, unmarried. Salary £130, rising to £160, with apartments, board, and washing.

LEWES DISPENSARY AND INFIRMARY AND VICTORIA HOSPITAL.—Resident Medical Officer. Salary £120 per annum, with apartments, board, &c.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £60 per annum, with board, and residence.

MAIDSTONE, WEST KENT GENERAL HOSPITAL.—Assistant House Surgeon and Anæsthetist, unmarried. Salary £60, with board, lodging, and washing.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Dental Surgeon. Also Medical Officer in Charge of the Electrical Department. Salary £52 10s. per annum.

MIDDLESBROUGH, NORTH RIDING INFIRMARY.—Assistant House Surgeon, unmarried. Salary £75 per year, with residence, board, and washing.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Junior Resident Medical Officer. Salary £70 per annum, with board, residence, and laundry.

NORTHAMPTON GENERAL HOSPITAL.—Assistant House Surgeon. Salary £50 per annum, with apartments, board, washing, and attendance.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—House Physician, also House Surgeon, for six months. Salary at rate of 50 guineas per annum, with board and residence.

PORTSMOUTH, ROYAL PORTSMOUTH HOSPITAL.—House Physician. Salary £50 per annum, with board, residence, and laundry.

ROYAL EAR HOSPITAL, Dean-street, Soho, W.—House Surgeon, non-resident, for six months. Honorarium at rate of £40 per annum.

ROYAL SOUTH LONDON DISPENSARY.—Honorary Surgeon-Dentist.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House Surgeon. Salary £80 per annum, with board and residence.

SEAMEN'S HOSPITAL SOCIETY, Greenwich, S.E.—For DREADNOUGHT HOSPITAL: Two House Physicians and Two House Surgeons. Salary in each case £50 per annum, with board, residence, and washing.—For BRANCH HOSPITAL, Royal Albert Dock, E.: Senior House Surgeon and Registrar, also House Surgeon. Salary of former £100 per annum, and of latter £50 per annum, with board, residence, and washing.

STAFFORD, STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House Surgeon. Salary £52 per annum, with board, residence, and laundry.

SUNDERLAND INFIRMARY.—House Surgeon. Salary £80 per annum, with board, residence, and washing.

THROAT HOSPITAL, Golden-square, W.—Assistant Surgeon.

WARRINGTON, LANCASHIRE COUNTY ASYLUM, Winwick.—Assistant Medical Officer, unmarried. Salary £150, rising to £300, with apartments, board, &c.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon, unmarried. Salary £50 per annum, with board, residence, and washing.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Assistant Ophthalmic Surgeon.

WINCHESTER, ROYAL HANTS COUNTY HOSPITAL.—House Surgeon, unmarried. Salary £65, rising to £75, with board, residence, &c. Also Honorary Physician in Ordinary.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Senior House Surgeon. Salary £100 per annum, with board, lodging, and laundry.

Births, Marriages, and Deaths.

BIRTHS.

HARDENBERG.—On March 25th, at Duffield House, Watford, the wife of E. F. H. Hardenberg, M.B., M.R.C.S., L.R.C.P., of a son.

PARKER.—On March 23rd, at Clovelly, Kilmacolm, Renfrewshire, the wife of James Parker, M.B., C.M., of a son.

TAYLOR.—On March 20th, at 35, Nicholas-street, Chester, the wife of J. G. Taylor, M.A., M.D., M.R.C.P., of a daughter.

DEATHS.

LEACH.—On March 11th, on the S.Y. *Argonaut*, John Comyns Leach, M.D., J.P., of The Lindens, Sturminster Newton, Dorset, aged 65 years.

ROME.—On March 12th, suddenly, on P. and O. s.s. *Namur*, Denzil Rome, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., aged 28 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

A RETIRED MEDICAL MAN AND GOOD OPENINGS.

IN the issue of THE LANCET of March 16th the following two little advertisements appeared:—

Wanted to purchase immediately, small PRACTICE in rising neighbourhood. Large, lowly rented house a necessity.—Address, No. 368, THE LANCET Office, 423, Strand, W.C.

For Sale, Nucleus of good-class Practice in excellent neighbourhood. Premium low.—Address, No. 369, THE LANCET Office, 423, Strand, W.C.

Among the replies received by the first advertiser, No. 368, was the following:—

COPY.

6, Stone St.
FAVERSHAM, Kent,
March 15, 1907.

Private & confidential.
In reply mention No. 368.

Dear Sir,

I can introduce you to some good openings for making a start in practice where you would be able to pay expenses from the beginning and make a good practice. They are situated in localities unopposed or where further medical help is required. If you like to give me a call here I can lay the cases before you

Watering-Place
Premium £100,

150 miles from London One doctor doing £2300 a year, and his assistant carrying on branch 5 miles away, but on the coast, doing £800 a year. A good man starting in the latter place would get it all the £800 in a year I am told by a medical friend. These are the only two doctors in these places.

Kent, premium £50, 20 miles from Town beautifully situated, pop 7000 and only 2 doctors, (partners) & 3 doctors only to 14,000. A fine chance, as extensive works are about to commence employing thousands of hands, houses with stables and gardens to let at £40, £45, £50 & £55 now vacant. Bracing, gravel soil, High Ground.

Kent, £50 premium, Best part of hop and fruit district, very good opening.

Bucks £30, & a similar premium for openings in Herts, Hants, Oxon, Essex, Staffs, and Surrey.

I can give some introduction to all. Yrs faithfully,
F. F. JAY, M.D.

To the second advertisement, numbered 369, a reply was sent upon a postcard in the same handwriting as the letter printed above, dated from 6, Stone-street, Faversham, Kent, and bearing the Faversham post-mark. The postcard ran as follows:—

COPY.

Dr. Betts will be glad to receive full particulars in the strictest confidence.

March 25, '07.

We suggest that the information which Dr. Jay proposes to sell to advertisers like No. 368, who wants to purchase a practice, is obtained from advertisers like No. 369 who wants to sell one. It is obvious that the result of Dr. Jay's intervention might be as follows. He could find out from No. 369 why he was anxious to leave his present position and obtain from him all the information tending to make that position covetable. He could then write to No. 368 and offer him information concerning an opening in return for a fee. He need have no other information about the practice to assume that it is a "good opening" and might easily lead No. 368 to purchase a business of no value. To ask money from a man for such a service is—well, let us say enterprising. But suppose Dr. Jay brings the practice of No. 369 to the notice of No. 368 as a business in a place where a medical man could set up for himself without going through the formality of purchase he would pocket a fee himself, while much damaging No. 369's chance of obtaining a purchaser.

We ask our advertisers to help us to stop such methods of business and to do this in their own defence. For the future no letters or post-cards will be forwarded to them from this office which we can tell emanate from Dr. Jay, but by the assumption of pseudonyms, by getting assistance in the directing of envelopes, by posting his replies elsewhere than in Faversham, and so on, he can easily elude our vigilance. In case advertisers do obtain offers of assistance from Dr. Jay we strongly advise them to make no reply, at any rate, to pay no money. Either as buyer or as seller they may be placed at a grave disadvantage in dealings carried on by such intervention, and it is not worth while to pay a fee for such services to any man, even though he be a professional brother.

THE MOTOR UNION AND THE CARS OF MEDICAL MEN.

THE Motor Union of Great Britain and Ireland is contributing towards the legal expenses of an important case which raises a question of great interest to medical men using motors-cars throughout the country—namely, whether they are to be charged a water rate as in the case of business vehicles, when they use their cars partly for professional purposes. The case was taken up at the instance of the Harrogate Automobile Club on behalf of one of its members who is also a member of the Motor Union. The member was sued at the Knaresborough Petty Sessions by the Harrogate corporation for the recovery of 10s., being a half-year's rate levied in respect of water for his car, which he refused to pay. Mr. J. H. A. Titley, the Motor Union local solicitor, submitted for the defendant that the corporation could not possibly, under the Act, ask him to pay for water for washing his car for "trade" purposes, that being the provision of the Act under which he was charged. The bench adopted this view and also decided against the contention of the town clerk that there was an implied contract because the defendant had paid on two previous occasions. The bench agreed, at the request of the town clerk, to state a case for the opinion of the High Court, and the Motor Union is assisting its member in order that the decision of the justices may be sustained. Any motorist who has had a similar difficulty with his water rate in the matter of special charges in respect of motor-cars should communicate with the secretary of the Motor Union at 1, Albemarle-street, London, W.

WHAT IS PLASTICINE?

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to answer your correspondent "London's" question, "What is plasticine made and coloured with?" Not a single ingredient enters into plasticine, composition and colouring matter, but what people are in the habit of using as food and swallowing every day, such things as sulphur, farina, a vegetable oil, vaseline—the colouring matter being absolutely harmless, no arsenic, copper, lead, or other deleterious substance entering it. The material has been subjected to the most rigorous independent tests by hostile critics as against analyses by experts employed by myself, and in the case of such educational authorities as the late London School Board, the Board of Education for New York, the Incorporated Institute of Hygiene, and other certified analysts, the claim for plasticine being an antiseptic and perfectly safe modelling material has been wholly conceded.

I might add further that of the hundreds of thousands of children now using plasticine there has never been an authenticated case of injury resulting, and of the scores of workpeople (including young girls and children) in my employ, who have been with me for many years engaged in the manufacture of plasticine, there has never been a case of injury, ailment, or epidemic whatever. The material has a wholly beneficial effect upon the skin and joints and has a healing influence upon burns, scalds, abrasions, and wherever the skin is broken. From very extended observations, and numerous reports from school teachers, I make the above statement without any qualification whatever.

My factory is open, by advertised invitation, to the inspection of the public, and many visitors to Bath avail themselves of it.

I am, Gentlemen, yours faithfully,
March 25th, 1907. WM. HARBUTT.

P.S.—The success with which plasticine has met has called into existence worthless and objectionable foreign imitations, some made with clays and caustic potash and other irritant alkalies. I had to warn the public against these dangerous counterfeits last year. Your correspondent may have made acquaintance with one of these "substitutes" for plasticine.

POST HOC, ERGO PROPTER HOC.

IN the course of his arguments in favour of teetotalism the lecturer chose to illustrate the harmlessness of water and the harmfulness of alcohol by placing an earth worm first in a glass of the former fluid and then in a glass of whisky. Of course, the worm showed a lively movement in the water, while in the whisky its activities apparently ceased for ever. At the close of the lecture the orator invited the audience to sign the pledge. One old lady pushing her way eagerly in front of others was heartily received and loudly exhorted to sign the pledge and to be a better woman. "No," she said, "I was not thinking about the pledge, I was just wondering where you got that whisky from as I have been suffering from worms for years."

THE PERCENTAGE OF SULPHUR IN FOODS.

M. Balland has published the results of his work on the determination of the amount of sulphur in various food materials (*Journal de Pharmacie et de Chimie*, Jan. 16th, p. 49). As in the case of the phosphorus determinations referred to in THE LANCET of March 2nd, p. 604, the tests were carried out on the fresh food materials and not, as is usually the case, on their ash. The following figures express the percentage of sulphur contained in the foods enumerated: wheat, maize, barley, and rye, 0·027 to 0·046; the percentage is slightly higher in oats and buckwheat. The following green vegetables were first dried in a stove: carrots, 0·092; lettuce, 0·214; turnips, 0·1831; leeks, 0·397; and potatoes, 0·1. The percentage of sulphur in the ordinary dried beans, haricot beans, lentils, and peas of commerce varied from 0·032 to 0·18. Stone fruits, dried in a stove, were found to contain notable proportions of sulphur, apricots and strawberries containing from 0·012 to 0·021 per cent., and cherries and peaches from 0·1 to 0·114 per cent. of sulphur.

A FAMOUS ENGLISH SURGEON.

AN Australian correspondent has sent us a copy of the *Melbourne Argus*, dated Feb. 2nd, 1907, in which there appears a flaming advertisement of the Freeman and Wallace Electro-Medical Institutes under the above title. The institutes, we learn, cure "bladder diseases, kidney diseases, blood poison, lost vitality, varicocele, skin disorders, weakness, rupture, piles, &c.," and address themselves to "weak men" who desire to be "made strong," urging them to "get cured now," for "these diseases we cure. We care not who has failed to cure you." The title of the advertisement is explained by the fact that the institutes have secured the surgical services of "Dr. Kempster, M.R.C.S. Eng., L.R.C.P. Lond., M.S.A. London," of whom they say that he "is an expert in the rapid treatment and cure of men's diseases, and is late Civil Surgeon to the British War Office, London; late Medical Officer of Health, London (Battersea division); late Assistant Divisional Surgeon, London Police; and Deputy District Medical Officer to Wandsworth and Clapham Districts of London (which have an estimated population of half a million), and Fellow of the Incorporated Society of Medical Officers Health, London. Dr. Kempster's experience is large and valuable, and in the rapid treatment and cure of men's diseases, arising from any specific cause, or from exhaustion or heredity, he is an expert both in method and in scientific knowledge. His abilities are so rare and his knowledge of practical surgery so pre-eminent that he has been secured at an enormous salary by the principal of the Freeman and Wallace Electro-Medical Institutes of Melbourne and Sydney for the benefit of diseased and suffering men. Dr. Kempster has qualifications scarcely equalled by any operating surgeon in Australasia; his medical career in England has been distinguished by high achievements in conservative surgery. He is associated with Dr. Wallace, the Institutes Chief Physician, who may be consulted free, by any man requiring the best medical advice possible to secure. Special appointments may be made."

Our correspondent inquires, "Is the gentleman being personated or has he really joined with this disreputable clique? Perhaps you will kindly try to throw a light upon the matter for us poor Australians." We have made inquiries, from which it appears possible that Kempster is still upon the Medical Register, though he should not be. He never was in the least respect a famous surgeon and his present occupation as a partner of quacks and a decoy for dupes does not surprise us.

APPARATUS FOR ELEVATING THE HIPS IN BED.

To the Editors of THE LANCET.

SIRS,—On p. 817 of THE LANCET of March 23rd are a picture and description of a new hip elevator made from the design of Dr. E. G. Gilbert. I would like to point out that four years ago (August 2nd, 1902) you published a picture and description of a similar apparatus identical in principle with the one figured in your present issue. In designing my "Sister Doris" bedrest I thought I was supplying a long-felt want, and having proved its comfort and also its capacity for carrying out all that is claimed for it—i.e., the prevention of slipping down in the bed—I am the more surprised that it is not generally known and in more general use.

I am, Sirs, yours faithfully,

Richmond, March 26th, 1907. GEORGE W. ORD.

P.S.—I might call attention to the fact that Messrs. Allen and Hanbury registered the "Sister Doris."

*** Mr. Ord is correct in his facts. But, after all, both devices are only the obvious outcome of the old household method of keeping the patient up by a small chair placed in the bed, so that it rests on the front edge of the seat and the front of "the back."—ED. L.

A SELF-FILLING FOUNTAIN PEN.

A VERY large proportion of the persons engaged in the professional and commercial worlds now use a fountain pen of some sort, carrying it with them as regularly as they do their watch, so that it is not surprising that the market offers a large choice of such contrivances or that new inventions claiming various advantages are frequently in evidence. The fountain pen has unquestionably been improved in detail, but we do not call to mind that any pen other than the "Conklin" has been improved in the direction of doing away with the accustomed method of replenishing the supply of ink by means of the glass dropper with its indiarubber teat. The Conklin Pen Co., through American Agencies, Limited, 38, Shoe-lane, London, E.C., have submitted to us the "Conklin" pen, for which no filler is required; the interior of the pen is, in fact, the filler and the reservoir for the ink. The operation for filling the pen is simple. Give a collar in the middle of the pen a quarter turn, place the point of the pen in a receptacle containing ink, press a crescent-shaped piece of steel over the collar, and the pen is filled. Turn back the collar and the reservoir is closed. In our hands the pen performed its mechanical duty admirably and also has proved a good instrument to work with.

THE VENTILATION OF HATS: AN EXPERIMENT.

WE have received from the Patent Padded Hat Co., of Bradford-on-Avon, a specimen of a "ventilated" hat, in which a simple but perhaps new idea is developed. The hat is of the common shape known as a "bowler" (Amer. "Derby," Canad. "Christie," Fr. *Melon*), though many dictionaries apparently refuse to recognise the word. The internal leather band of the hat has sewn on to it six small pieces of thin leather about one and a half inches square, arranged at intervals around the band, and each piece incloses a pad of soft felt. The hat, which is perforated in the crown, has no lining, but in other respects, such as in the band, brim, and binding, it is similar to the usual type of bowler. There is ample room for ventilation all round the head, a free passage of air being permitted between the ventilation in the crown and the air spaces next the skull. There is no doubt that hats should be properly ventilated and they should not fit so tightly as to leave a mark or ridge on the forehead, for this means interference with the nutrition of the scalp. But the general public is rather conservative in such matters. It has got on till now with a hat fitting the head, and whether it will appreciate the endeavour to convert it to the "ventilated" hat we do not attempt to guess. The idea, however, is a sound one, and may be quite novel; but has not something like it been adopted in the construction of pith helmets?

BRITISH MEDICAL BENEVOLENT FUND.

To the Editors of THE LANCET.

SIRS,—I shall be grateful to anyone who has clothing for men, women, or children to spare for distribution to distressed members of the profession or their families if they will send such articles of clothing to the address given below, where I will receive and send them on as I have done hitherto.—I am, Sirs, yours faithfully,

EDWARD EAST.

24, Randolph Crescent, Maida Hill, W., March 11th, 1907.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (3 P.M.), St. Mark's (2.30 P.M.).

TUESDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M., Ophthalmic, 2.15 P.M.), Tottenham (2.30 P.M.).

WEDNESDAY (3rd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.).

THURSDAY (4th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (2.30 P.M.), Tottenham (Gynæcological, 2.30 P.M.).

FRIDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.).

SATURDAY (6th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY (3rd).—OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M.: Special General Meeting to receive the Report of the Council. Specimens will be shown by Dr. H. R. Andrews, Dr. Lewers, and Mr. J. H. Dauber. Paper:—Mr. J. D. Malcolm: On the Advisability of Removing the Cervix in performing Hysterectomy.

THURSDAY (4th).—NORTH-EAST LONDON CLINICAL SOCIETY (Tottenham Hospital, N.).—4 P.M.: Clinical Cases.

FRIDAY (5th).—WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—8 P.M.: Clinical Evening.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Exhibition of Cases and Specimens.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—Discussion on the Necessity for Organisation in the Medical Profession (opened by Dr. F. S. Toogood).

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY (2nd).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Moullin: Gynæcological Operations. 2 P.M.: Medical and Surgical Clinics. X Rays. Dr. Ball: Diseases of the Throat, Nose, and Ear. 2.30 P.M.: Operations. Dr. Abraham: Diseases of the Skin.

NORTH-EAST LONDON POST GRADUATE COLLEGE (Tottenham Hospital, N.).—Cliniques:—10.30 A.M.: Medical Out-patient (Dr. Auld). 2.30 P.M.: Gynæcological Out-patient (Dr. Giles), Surgical Out-patient (Mr. Edmunds). Surgical Operations (Mr. Carson).

WEDNESDAY (3rd).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. Dr. Saunders: Diseases of Children. 2 P.M.: Medical and Surgical Clinics. X Rays. 2.30 P.M.: Operations. Dr. Robinson: Diseases of Women.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—Cliniques:—2.30 P.M.: Skin (Dr. Meachen), Eye (Mr. Brooks), Medical Out-patient (Dr. Whipham).

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M.: Demonstration:—Mr. Stuart-Low: Middle Ear and Labyrinth.

THURSDAY (4th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. X Rays. 2.30 P.M.: Operations.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—2.30 P.M.: Demonstration on Fevers (Dr. F. Thomson at the North-Eastern Fever Hospital, St. Ann's-road, N.), Gynæcological Operations (Dr. Giles). Cliniques:—Medical Out-patient (Dr. Whiting), Surgical Out-patient (Mr. Carson). 3 P.M.: Medical In-patient (Dr. Chappel).

FRIDAY (5th.) POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Moullin: Gynæcological Operations. 2 P.M.: Medical and Surgical Clinics. Dr. Ball: Diseases of the Throat, Nose, and Ear. X Rays. 2.30 P.M.: Operations. Dr. Abraham: Diseases of the Skin.

NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—9.30 A.M.: Clinique:—Surgical Out-patient (Mr. H. Evans). 2.30 P.M.: Surgical Operations (Mr. Edmunds). Cliniques:—Medical Out-patient (Dr. Auld), Eye (Mr. Brooks). 3 P.M.: Medical In-patient (Dr. Leslie).

SATURDAY (6th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. 2 P.M.: Medical and Surgical Clinics. X Rays. 2.30 P.M.: Operations. Dr. Robinson: Diseases of Women.

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IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 27th, 1907.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Mar. 21	30·60	S.W.	...	80	54	37	38	41	Fine
,, 22	30 36	W.	...	57	56	40	40	44	Fine
,, 23	30 40	N.E.	...	93	56	39	39	41	Fine
,, 24	30 39	W.	...	86	57	39	39	41	Fine
,, 25	30 37	S.W.	...	76	56	39	39	40	Fine
,, 26	30 44	S.W.	...	60	57	40	43	44	Foggy
,, 27	30·50	S.	...	92	57	41	42	43	Foggy

During the week marked copies of the following newspapers have been received.—*Melbourne Argus, Scarborough Evening News, Standard, Cornish Times, Westminster Gazette, Liverpool Post, Manchester Guardian, Staffordshire Sentinel, Dublin Telegraph, Manchester Weekly Times, Glasgow Herald, Leeds Mercury, Daily Telegraph, Daily Chronicle, Gloucester Citizen, &c.*

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